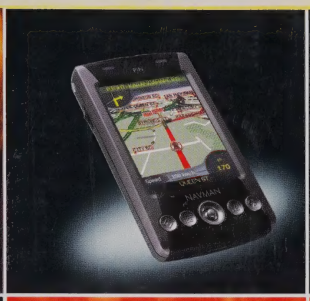
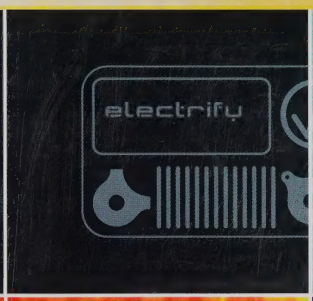
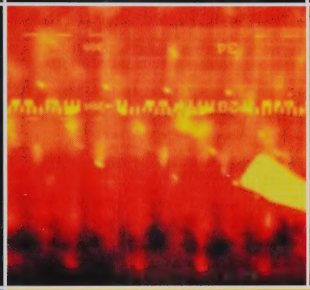
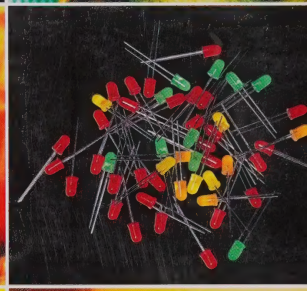




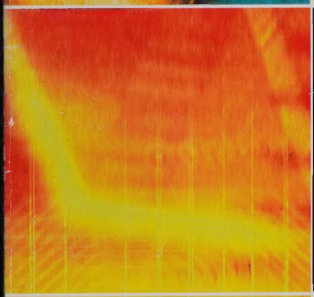
2005/06 ELECTRONICS CATALOGUE

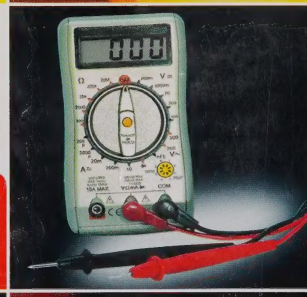




DICK SMITH ELECTRONICS

That's where you go!





www.dse.co.nz

$2

DIRECT SALES DIVISION

Our Direct Sales team can advise you on the best products and solutions for you and your business. Our team of product specialists can offer the latest in products, competitive pricing and keep you informed about your order.

Dear Customer

It gives me great pleasure to introduce the 2005 Dick Smith Electronics catalogue. It's not the first for the company, but it's the first catalogue I've introduced as General Manager.

Dick Smith Electronics is a leading company in the fast changing electronics market and I'm looking forward to contributing to the ongoing development of the company, its product range and its team.

Over the last year, we have opened new stores in Upper Hutt and Johnsonville, and relocated others to better premises - Thames, Blenheim, Riccarton and shortly, Napier and Masterton. We have a vigorous new store plan for the coming year - with 4 new stores by February 2006. You'll never be far from a Dick Smith Electronics store.

Dick Smith Electronics stores aim to satisfy a broad spectrum of customers needs – from trade and traditional electronics to the latest in technology.

Electronics is a constantly evolving and changing field, and in order to simplify technology we are committed to having trained and knowledgeable staff who can advise customers – and provide the information they need.

We have worked hard to ensure that the product in this catalogue is as comprehensive as possible, and we've also reviewed our pricing structure to ensure that all our products are competitive in the market place.

Enjoy the catalogue – and I thank you for your support.

Stu Meadows
General Manager
New Zealand

BUSINESS TO BUSINESS

Call our friendly and helpful customer service staff to make any enquires or place an order. They are dedicated to giving you the right advice and the best price.

30 DAY ACCOUNT

Direct Sales Division offers all products that are available in regular Dick Smith Electronics and Dick Smith Electronics Powerhouse Stores.

- Huge Product Range
- Wholesale Pricing
- Orders

Note: Wholesale pricing is exclusive to the Direct Sales Division, and is not available through Dick Smith Electronics company stores, stockists, franchises, agents or Dick Smith Electronics Powerhouse stores.

ORDERS AND ENQUIRIES

0800 373 347

Normal business hours Toll Free within New Zealand, Fax 0800 800 290

Outside New Zealand Ph +64 9 414-2800 Fax +64 9 414-2886

Website: www.dse.co.nz

Call us to register for ordering at wholesale prices through our website.

E-mail: sales@dse.co.nz

Mail: Freepost 2170. Private Bag 102903,
North Shore Mail Centre

CONTENTS

OFFICE & COMPUTERS 004 ➲ 035

Bags_Binders, Laminators & Shredders_Calculators & Organisers_Computer Adapters_Computer Cables_Computer Cooling_Computer Hardware
Computer Media (CD, DVD, Etc)_Computer Networking _Computer Power Supplies_Computer Security_Computer Speakers & Microphones
Computer Storage Products_Computer Upgrade Cards_Dictionaries, Translators & Solvers_Drums_Toner_Ink_Paper
Ribbons_Handheld Computers_Keyboard & Mouse_Labelling Solutions_Memory & Memory Cards_Monitors & Displays_PDAs

COMMUNICATIONS 036 ➲ 057

BlueTooth_Cellphone Accessories_Phone Accessories_GPS Navigation_Intercoms_Telephone_CB Radio_Two Way Radio_Radio Scanners
TV Antenna and Accessories_TV Remotes_AV Cables_AV Senders_AV Switches

SECURITY & SURVEILLANCE 058 ➲ 065

Telecopes_Binoculars_Personal, Home & Vehicle Alarms_Surveillance

ELECTRICAL 066 ➲ 085

Batteries_Battery Chargers_Bulbs, Globes & Leads _lamos-leads_Converters & Inverters_Fridges_Plugpacks_
Power Boards_Power Supplies_Solar_Switches _Torches_Timers_Transformers_Tarvel Adapters

TOOLS & HARDWARE 086 ➲ 111

Adhesives, Glues & Tapes_Aerosols_Bits_Butane Gas_Cleaners_Clips & Leads_Crimpers_Cutters, Nippers & Pliers_Drivers_Extractors_Kits
Meters_Nibblers & Reamers_Power Tools_Servcie Aids_Soldering_Spanners_Measurement & Test Equiptment_Multimeters & Accessories_Flute

COMPONENTS 112 ➲ 143

Adaptors_Battery Holders_Boxes & Cases_Breadboards_Capacitors_Connectors_Dynamos, Motors & Pumps_Fasteners_Fuses & Fuseholders
Hardware_Inductors_Optoelectronics_Transistors_PCB & Related_Plugs_Resistors_Semiconductors_Sockets_Switches

CABLES & WIRES 144 ➲ 152

Winding Wire_Fastenings_Cable Accessories_Automotive Cables_Cable Insulation_Cut Length Wire_Speciality Wire

KITSETS 153 ➲ 162

Funway_Meccano_Books_Educational_General

DATA SECTION 163 ➲ 185

Technical Data

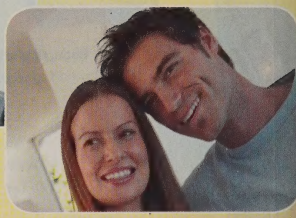
INDEX 186 ➲ 192

By Product Code_Alphanumeric_**Store Locations**

Prices shown in this catalogue include GST and are valid until 31 October 2005. All supplies of goods are subject to availability at time of order.

As easy as D.S.E.

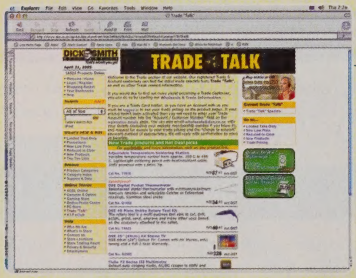
www.dse.co.nz actually!



Shopping online is easy – simply visit our website and browse **over 15,000 products**, including the latest product releases, up-to-date pricing and stock availability. Locating the product of your choice is easy, using either our powerful, **learning search engine** or our comprehensive category browser.

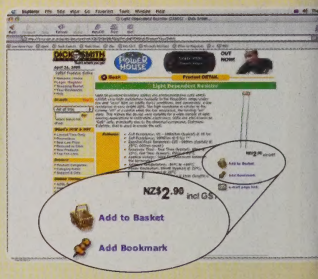
CREDIT CARD SAFE

We use technology called Secure Sockets Layer (SSL), which encrypts (or scrambles) your details thereby keeping them private from other computers.



- OVER 15,000 PRODUCTS ONLINE
- UPDATED DAILY
- EASY-TO-USE PRINTER CARTRIDGE SELECTOR
- COMPREHENSIVE SUPPORT AND DATA SECTION
- HOT DEALS
- REDUCED TO CLEAR ITEMS
- LATEST PROMOTIONS

You can manage all your details online, including email subscriptions. You can also view your trade pricing and quantity breaks. Registering on our website as a trade customer also means you can pay by credit card or charge to your Dick Smith Electronics monthly account.



EASY DELIVERY

Usually within 24-48 hours of receipt of your order

ONLINE STORES:

We also have several "Online Stores" that are dedicated to a certain range of products. These pages contain the latest products and specials.

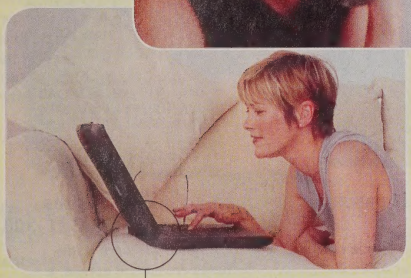
- ADSL Online
- Cameras & Optics
- Gaming Store
- Online Photo Centre
- PC Store

YOUR ORDER IS PROCESSED IMMEDIATELY

Once you've given us your payment details, our computerized order fulfillment service does the rest. Just use the payment method most convenient to you.

We accept:

All major credit cards: Bankcard, Mastercard, Visa, American Express, Diners Club and Drivecard.
Overseas credit cards are accepted up to $200. For large orders, a bank draft is required.
Cheques in $NZ
Money orders in $NZ
Bank drafts in $NZ



TRADE ID CARD

The Dick Smith Electronic Trade ID Card enables our Trade Cash Customers to purchase trade goods at any store nationwide at Trade prices. This card will also enable you to receive regular e-mails/mailouts and Trade Specials.

If you are:

A] A reseller of product
B] A manufacturer
C] A service company
D] A registered technician
E] Have a relevant Tradesman's Certificate

- you may apply at your local Dick Smith Electronics store or send your request to: Dick Smith Electronics Wholesale, Private bag 102903, North Shore Mail Centre, Auckland, or download from the Wholesale web page on-line at www.dse.co.nz

WE'LL FREIGHT IT TO YOU

Courier

- Delivery anywhere in New Zealand within a few days.
- Air Freight
- Fast and efficient!

Please Note

Goods which are considered dangerous can't be sent by airfreight or by NZ Post. These include:

- All caustic solutions (i.e. ferric chloride, photo etches, etc)
- Aerosol pressure packs (i.e. anything flammable, gas refills, cleaning sprays, etc)
- Pressurised goods ("screech" alarms, butane-powered soldering irons, etc)

When ordering, please specify road freight for these items. Extra costs apply.

FREIGHT CHARGES

All deliveries are by courier and must be signed for.

North Island deliveries per parcel up to 5kg	$5
North Island Dangerous Goods Minimum	$14
South Island deliveries per parcel up to 5kg	$10
South Island Dangerous Goods Minimum	$20

(These rates are correct as at 1 July 2005, but are subject to change. All customers will be advised prior to shipping if there is an additional cost).

INTERNATIONAL FRAIGHT CHARGES

Prices are in $NZ for international economy. International courier with Track & Trace can be arranged at extra cost.

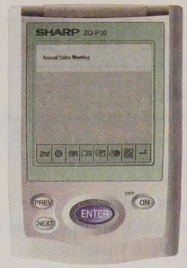
Weight	Australia	South Pacific
Up to 0.5kg	$10.00	$14.00
Up to 1.0 kg	$14.00	$23.00
Up to 2.0 kg	$23.00	$40.00
Up to 5.0kg	$43.00	$75.00

Weight	Asia/America	Europe
Up to 0.5kg	$17.00	$20.00
Up to 1.0kg	$30.00	$32.00
Up to 2.0kg	$52.00	$60.00
Up to 5.0kg	$100.00	$115.00

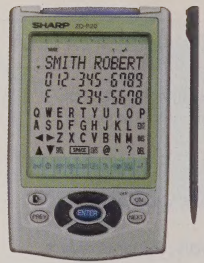
These rates are subject to change. You will be advised prior to shipping if there is any additional cost.

Please note: There may be some items that we are not able to ship overseas. You will be advised if your order contains any of these items.

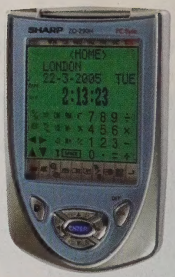
SHARP
Organiser EL6053SB
This 8KB databook provides quick access to information in a slimline electronic organiser.
V9407
$19.98



SHARP
Organiser ZQP10B
Pen touch PDA style operation with 12 column by 3 lines LCD. 96KB memory size (equivalent via compression), 64KB (actual).
V9390
$29.98



SHARP
Organiser ZQP20C
With the Sharp ZQP20C pen touch organizer at your fingertips, you'll discover it's never been easier to store personal and business information.
V9389
$49.98



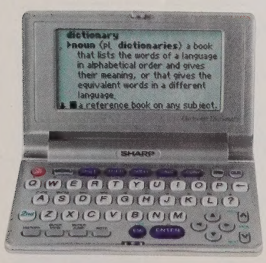
SHARP
Organiser ZQ290H
Includes a USB PC-link to synchronise with Microsoft Outlook. You can also track calories and carbohydrates with the built-in pedometer and diet function!
V9433
$98.76

Franklin
Spellmaster SPQ108
Write with confidence! This handy pocket sized unit phonetically spell checks 110,000 words and includes a calculator, crossword solver and 8 fun word games.
V7367
$49.87

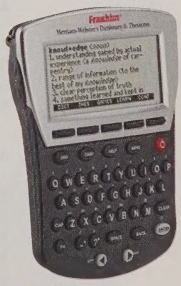
Franklin Crossword Solver CWR108
More than just a spellchecker - this unit finds missing letters, words, phrases, and anagrams. Even provides alternatives to solve the toughest crosswords.
V7337
$79.87

Seiko Oxford Thesaurus ER-2100
Full contents of the Concise Oxford Thesaurus with over 4,000,000 synonym links. Large/clear 2-line display with graphics and contrast control. Extensive 200,000 word Oxford database.
V9459
$79.87

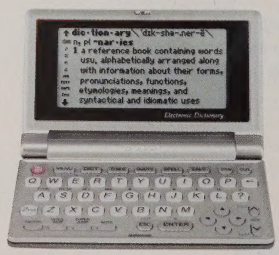
Franklin Times Crossword Game CGT-300
The Times Crossword Game includes crossword games, a crossword solver, an anagram solver and a crossword builder.
V6145
$98.76


dictionary
noun (pl. dictionaries) a book that lists the words of a language in alphabetical order and gives their meaning, or that gives the equivalent words in a different language.
a reference book on any subject.

SHARP Electronic Dictionary PWE300
Includes the Oxford Dictionary of English, and the New Oxford Thesaurus of English - both fully searchable. Plus many more convenient functions.
V6148
$148



Franklin
Bookman III MWD1470
Merriam-Webster Dictionary & Thesaurus. Instant access to over 300,000 definitions and 500,000 synonyms! Phonetic spell correction allows you to enter words by how they sound.
V7172
$148


dic·tion·ary dik-sha-ner-ē
pl -nar·ies
1 a reference book containing words usu. alphabetically arranged along with information about their forms, pronunciations, functions, etymologies, meanings, and syntactical and idiomatic uses

SHARP Electronic Dictionary PWE500
Includes the Oxford Dictionary of English, the New Oxford Thesaurus of English, and the Oxford Dictionary of Quotations - all fully searchable.
V6111
$178

Seiko Oxford Dictionary/ Thesaurus/Spellchecker ER-6100
Contains all 240,000 words, phrases and definitions from the Concise Oxford Dictionary. Over 4,000,000 synonym links with examples of usage from the Concise Oxford Thesaurus.
V9473
$198

palmOne

Zire 31 Handheld

The Zire 31 handheld from palmOne gives you outstanding organisation at an affordable price. Easy-to-read colour screen, MP3 player and 16MB Palm OS.
V6127

$198

palmOne

Tungsten E2 Handheld

The sleek, stylishly designed Tungsten E2 handheld from palmOne brings your entire world to life. Its new flash memory keeps all that information safe - even if you don't have time to recharge.
V6166

$448

palmOne

Zire 72 Handheld

Now you can shoot photos, capture and watch video clips anywhere you go. Or listen to MP3s as you take your tunes wherever life takes you. When it comes to productivity, the Zire 72 handheld means business.
V6126

$498

palmOne

Tungsten T5 Handheld

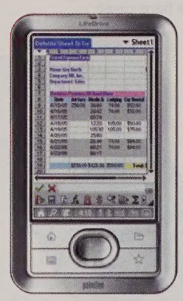
Incredible 256MB memory capacity lets you can carry more and do more. Spreadsheets. Songs. Photos. The works. Add even more memory and applications via the expansion card slot, which supports SD, SDIO, and MMC formats.
V6146

$698

palmOne

LifeDrive Mobile Manager

Features a 4GB hard drive and built-in Wi-Fi & Bluetooth support, you can easily carry files from your desktop computer, 300 songs, 2.5 hours of video, vacation photos, and more.
V6167



$898

palmOne

Treo 650 Smartphone

The Treo 650 smartphone from palmOne makes it easier than ever to stay connected. It simplifies your life by combining a compact mobile phone with email, an organiser, messaging and web access.
E2921

$1298

HP iPAQ Pocket PC RZ1710

Appreciate the beauty of simplicity - all the PDA essentials you need at a price that'll set you free. 203MHz processor with up to 25MB user memory, running Windows Mobile 2003 Software for Pocket PC.
V9426

$398

HP iPAQ Pocket PC rx3417

The HP iPAQ rx3417, powered by Microsoft Windows Mobile software, lets you enjoy your music, photos, and video wherever you go.
V9432

$598

HP iPAQ Pocket PC rx3715

The HP iPAQ rx3715 is powered by Microsoft Windows Mobile software and it lets you enjoy your music, photos and video wherever you go.
V9428

$698

HP iPAQ Pocket PC hx4700

The powerful HP iPAQ hx4700 Pocket PC with high-resolution display is designed for fast, versatile mobile computing.
V9427

$898

HP iPAQ Pocket PC h6365

All wireless connection possibilities in one PDA! This quad-band GSM/GPRS Pocket PC features and integrated digital camera, Wi-Fi 802.11b and Bluetooth connectivity - making it the ultimate wireless PDA and Pocket PC Phone.
V9458

$998

Accessories available online at www.dse.co.nz

DICK SMITH ELECTRONICS That's where you go!

SHARP Compact Calculator EL233L

An excellent basic calculator with 8 digit display. Great for keeping shopping within your budget. Has Memory, Percentage and Square Root keys.

V3848

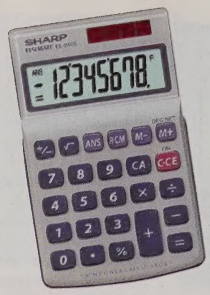
$7.98

SHARP Sharp Pocket Calculator EL 1235

Twin powered 12 digit display calculator with hard cover.

V9414

$9.98

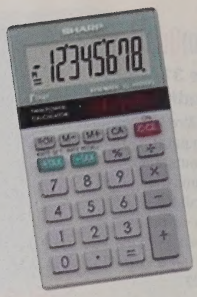


SHARP EL240S Calculator

Twin powered handheld 8-digit calculator with slant and large display.

V9408

$11.98

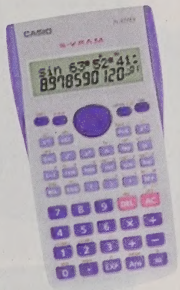


SHARP Tax Calculator ELW200G

+/- Tax twin powered 8 digit calculator with large display.

V9404

$14.98

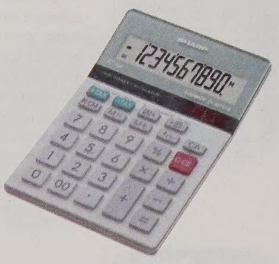


CASIO. Scientific Calculator FX82 Blue/white

Incredible scientific calculator with the all the important functions that you require in a scientific calculator, plus the new replay button.

V4736

$29.98 ea

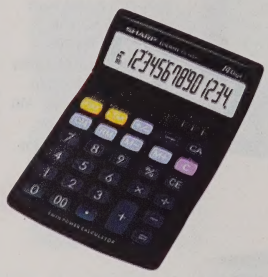


SHARP Tax Calculator ELM711G

Twin powered large display 10 digit calculator with conversion and tax function.

V9406

$24.98

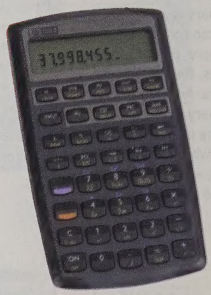


SHARP Tax Calculator EL-145A

14-digit calculator, with tilted screen and tax functions.

V9415

$29.98

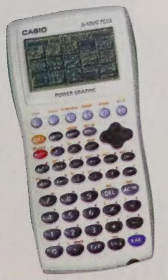


HP Business Calculator 10b

The HP10B has more than 100 busines uses. Interest rate conversions, linear regression and forecasting, mark up as a percent of cost and price. A wise investment for business people and business students.

V3530

$98.76

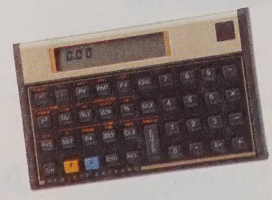


CASIO. Graphing Calculator FX9750G PLUS

With a large, 21 character x 8 line display with dual screen capability, the FX-9750G Plus has a on-screen, icon-driven menu that provides easy access to advanced functions.

V9436

$98.76



HP RPN Financial Calculator 12c

Over 120 built-in business functions. Allow 20 different cashflows. Reverse Polish Notation. The perfect calculator if you are in Real Estate, Banking or you are a Financial Professional.

V9324

$198

SHARP Portable Printer Calculator EL1801C

Sharp's EL-1801C comes featuring a LCD display, Tax keys, Two color printer, 4-key memory, and PC touch keyboard.

V9410

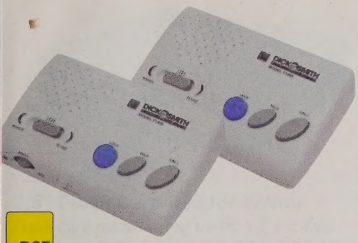
$79.98

SHARP Calculator EL2901RH

Two-colour desktop printer calculator with large display and cost / sell / margin function.

V9409

$98.76



DSE

Wireless Intercom

4 channel wireless intercom for home and small office use.

F1405

$98.76

DSE

Slimline Phone

Simple yet stylish this phone has all the options you need and it's wall mountable.

F4525

$19.87

DSE

2mm Binder Covers 25pk

Binder covers to be used in the F1327 - DSE Thermal Binder.

F1328

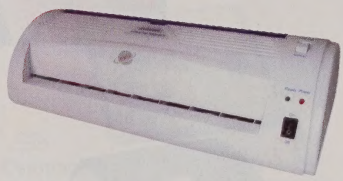
$24.98

PKG

A3 Laminating Pouch 100 pack

F0570

$49.98



PKG

A3 Laminator

F0569

$148

DSE

Thermal Binder

This thermal binder will bind all those important documents with ease.

F1327

$98

Replacement Labels	F1374	Continuous label for QL-550	$39.88
	F1372	P-Touch Label Blk/Grn 9mm	$39.98
	F1373	Std Address Label for QL-550	$29.98
	F1501	P-T Tape Blk on Wht TC291 9mm	$34.98
	F1506	P-T Tape Blk on Wht TC201 12mm	$34.98
	F1601	P-touch Label Blk/Blu 9mm-M521	$19.98
	F1603	P-touch Label Blk/Gld 9mm-M821	$19.98
	F1604	P-touch Label Blk/Slvr 9mm 100	$19.98
	F1614	P-touch Label Blk/Clr 12mm SO	$39.98
	F1631	P-touch Label Blk/Wht 9mm 320	$39.98
	F1634	P-touch Label Blk/Wht 9mm 100	$19.98
	F1635	P-touch Label Blk/Wht 12mm 100	$19.98
	F1651	P-touch Label Wht/Blk 9mm	$39.98
	F1652	P-touch Label Blk/Wht 12mm	$34.98
	F1653	P-touch Label Blk/Clr 12mm	$34.98
	F1654	P-touch Label Blu/Wht 12mm	$34.98
	F1655	P-touch Label Blk/Wht 6mm	$39.98
	F1656	P-touch Label Wht/Blk 9mm	$39.98
	F1657	P-touch Label Blu/Wht 12mm	$39.98
	F1658	P-touch Label Wht/Blk 12mm	$39.98
	F1659	P-touch Label Gld/Blk 12mm	$39.98
	F1669	P-touch Label Blk/Ylw 18mm	$44.98
	F1673	P-touch Label Blk/Ylw 12mm	$39.98
	F1674	P-touch Label Blk/Blu 12mm	$39.98
	F1680	P-T Label Blk/Clr 9mm 320 SO	$39.98
	F1681	P-touch Label Blk/Ylw 9mm 320	$39.98
	F1683	P-touch Label Blk/Wht 12mm 231	$39.98
	F1685	P-touch Label Blk/Wht 18mm	$44.98
	F1688	P-touch Label Blk/Wht 24mm	$44.98
	F1689	P-touch Label Red/Wht 12mm	$39.98
	F1691	P-touch Label Blk/Gld 12mm	$19.98
Card Readers	XH8165	DSE 3.5 Card Reader 7in1	$33.00
	XH8276	DSE 3.5 Digital Media Drive	$68.00
	XH8281	DSE USB Digital Media Drive Ex	$118.00
Compact Flash (CF)	XG1309	DSE 128MB CompactFlash Card	$69.98
	XG1310	DSE 256MB CompactFlash Card	$118.00
Compact Flash (CF)	XG1311	DSE 512MB CompactFlash Card	$222.00
	XG1308	DSE 64MB CompactFlash Card	$54.98
	XG2117	DSE CompactFlash Card 1GB	$297.00
Desktop DDR	XH9415	DSE 256MB DDR RAM PC2700	$78.00
	XH9416	DSE 256MB DDR RAM PC400	$78.00
	XH9417	DSE512MB DDR RAM PC400	$143.00
Desktop SDRAM	XH7429	128Mb PC133 SDRAM – 8 Chip	$86.00
	XH8016	256Mb PC133 SDRAM – 16 Chip	$157.00
Memory Stick (MS)	XG1315	LEXAR 128Mb Memory Stick	$79.98
	XG2116	LEXAR 256Mb Memory Stick	$109.98
	XG1314	LEXAR 64Mb Memory Stick	$59.98
	XG2084	Sony 128MB Memory Stick	$89.98
	XG2125	SONY 128Mb Memory Stick Duo	$89.98
	XG2188	Sony 256Mb Memory Stck Pro Duo	$118.00
	XG2147	SONY 256Mb Memory Stick Pro	$118.00
	XG2147	SONY 256Mb Memory Stick Pro	$118.00
	XG2144	SONY 512Mb Memory Stick Pro	$198.00
	XG2083	SONY 64Mb Memory Stick	$69.98
	XG2124	SONY 64Mb Memory Stk Duo	$69.98
	XG1317	DSE 64Mb MultiMedia CardMMC	$59.98
Notebook DDR	XH8078	DSE 256Mb SODIMM AcerAsus ECS	$98.82
	XH9419	DSE 256Mb SODIMM DDR333	$93.00
	XH8079	DSE 512Mb SODIMM AcerAsus ECS	$198.00
	XH9420	DSE 512Mb SODIMM DDR333	$214.00
Picture Card (XD)	XG1348	Fuji 256Mb XD Picture Card	$99.98
	XG0097	FUJIFILM 128Mb XD Picture Card	$59.98
	XG0040	FUJIFILM 64Mb XD Picture Card	$39.98
	XG1355	OLYMPUS 128Mb xD Card	$99.98
	XG1354	OLYMPUS 64Mb xD Picture Card	$49.98
Secure Digital (SD)	XG1320	DSE 128Mb SD Card	$69.98
	XG1321	DSE 256Mb SD Card	$128.00
	XG1408	DSE 512Mb SD Card	$227.00
	XG1319	DSE 64Mb SD Card	$54.98
	XG1325	DSE SmartMedia 128Mb	$89.98
	XG1324	DSE SmartMedia 64Mb	$49.98

brother

P-Touch PT2300

You can use it as a stand-alone labeler or connect it to your PC and turn virtually any on screen font, image or graphic into a crisp P-touch label!

F1321

$198

brother

P-Touch PT55

The PT-55 is a light, handheld electronic labeller ideal for school children of all ages. It produces labels quickly and easily and comes with a safe, built-in tape cutter.

F1323

$29.87

brother

P-touch PT-2420PC

Combine text, symbols, bar codes, photos and graphics to create custom labels. Includes easy to use templates for address labels, video labels, CD labels, and more.

F9099

$148

brother

Labeller QL-550

Simply print quick, beautiful labels from your PC. Print text or graphics on a variety of durable die-cut labels including address, shipping, file folder and CD/DVD sizes.

F1371

$198

brother

P-Touch PT65

Compact handheld label maker. Produces professional adhesive labels, ideal for home or office.

F9069

$39.87

brother

P-Touch PT1000

Features separate ABC & 123 keys, shortcut features, preview screen, manual built in cutter and slim handheld design. Compatible with TZ series tapes.

F1365

$49.87

brother

PT-1750 Label Machine

The PT-1750 delivers the performance and quality you need to create professional laminated labels. This highly versatile, very affordable electronic labelling system uses durable, laminated "TZ" tape. F9076

$98.76

brother

Electrical P-Touch PT1650

With an easy grip, rubber impact guards and rugged carrying case, the new PT-1650 is designed for everyday use in the field and on the go.

F1370

$198

DSE

3.5" Flash Card Reader Writer

Flash Card reader writer for PC 3.5" PC drive bay. Supports CF, MD, SM, SD, MMC, MS & MS Pro cards as well as providing front USB port. Fast USB 2.0 interface backward compatible with USB 1.1. Works with USB 2.0 compatible Windows and Linux computers. XH8165

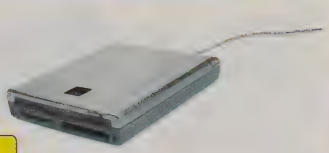
$36

DSE

3.5 Digital Media Drive

This Digital Media Drive allows you to read and write 3.5" floppy disks and a wide range of memory cards (CF, MD, MS, SM, MMC & SD). Easy to install and works with Linux 2.4.x or above, and Windows 98SE, Me, 2000, XP.
XH8276

$48.88



DSE

USB Digital Media Drive External

It combines both a floppy drive and a flash card reader in one compact design. It supports USB 2.0 high-speed transmission to the following Flash media types: CompactFlash" (CF), MicroDrive" (MD), SmartMedia" (SM), Secure Digital " (SD), Multi Media Card " (MMC), Memory Stick " (MS & PRO & DUO). XH8281

$118

DSE

SD Cards

Description	Cat No.	Price
128mb	XG1320	$58
256mb	XG1321	$98
512mb	XG1408	$168
1GB	XG4605	$248

DSE

Compact Flash Card 256MB

Memory Cards are used as the storage media for most Digital Cameras. Having an extra Memory Card is like having a spare roll of film for your traditional camera. It simply means you can keep taking pictures for longer.
XG1310

$98

DSE

CF Card

Description	Cat No.	Price
128mb	XG1309	$58
512mb	XG1311	$168
1GB	XG2117	$248

FUJIFILM
XD Cards

Description	Cat No.	Price
128mb	XG0097	$68
256mb	XG1348	$108
512mb	XG1400	$178

OLYMPUS
XD Cards

Description	Cat No.	Price
128mb	XG1355	$68
256mb	XG1356	$108
512mb	XG4722	$178

SONY
Memory Sticks

Description	Cat No.	Price
128mb	XG2084	$89.98
256mb	XG2147	$118
512mb	XG2144	$198

DSE

13 in 1 USB 2.0 Card Reader

This 13-in-1 card reader is very easy to install and use. It will allow you to quickly transfer data such as photos, video, songs and files between memory cards and your computer thanks to its USB 2.0 interface.
XG4615

$89.97

DSE

Camera Bag

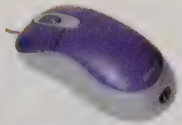
Description	Cat No.	Price
Small	XG0119	$19.87
Large	XG0120	$29.87
Small	XG0121	$19.97
Large	XG0122	$29.97

LowePro Camera Bags

Description	Cat No.	Price
D-Res10 AW	XG2109	$39.98
D-Res 8	XG2111	$27.98

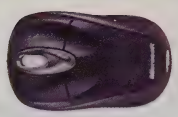
DICK SMITH ELECTRONICS That's where you go!

Microsoft Optical Wheel Mouse
IntelliEye optical wheel mouse. Optical sensor scans your desktop 1,500 times per second.
XH1914
$49.98



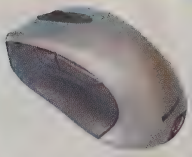
Microsoft Optical Mouse Blue
Turn any desktop into a bright, vibrant space with the Microsoft Optical Mouse Blue. It offers a fun design with a wider, one-of-a-kind, clear scroll wheel and a signature red optical glow.
XH1915
$59.98

Microsoft IntelliMouse Explorer
Uses a new optical sensor called IntelliEye which scans the surface beneath the mouse 1500 times per second to track the smallest motion.
XH1858
$98.76



Microsoft Wireless Notebook Optical Mouse
Handy optical mouse features a tiny snap-in receiver that plugs into your notebook when you're ready to work, and snaps into your mouse when you're ready to roll. Extended battery life, up to 3 months.
XH1947
$79.38

Microsoft Wireless Optical Mouse
This Microsoft Wireless Optical Wheel Mouse with Tilt Wheel Technology is a fantastic mouse. USB and PS2.
XH1929
$92.27



Microsoft Wireless IntelliMouse Explorer
IntelliEye optical technology offering unprecedented performance, accuracy and control.
XH1896
$98

DSE
PS/2 Mouse
Comfortable 2-button PS/2-style mouse for use with PC and compatibles.
XH1864
$11.97

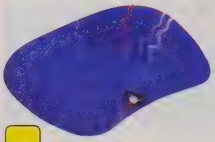
DSE
Optical Mouse
Optical scroll mouse. Advanced optical pick-up and suitable for PC compatible computers with either PS/2 or USB port.
XH5117
$29.98

Optical Scroll Mouse
PS/2 or USB, programmable buttons and dual scroll.
XH1893
$38.26

PS/2 Wireless Mouse
Wireless multi-channel mouse - reduce desktop clutter
XH1891
$28

DSE
Trackball Mouse
3 button dual-wheel trackball with programmable button. Supports Zoom and auto-scroll.
XH1866
$38.57

Microsoft Trackball Optical
Combines an IntelliEye optical sensor with advanced ball design. Tracks the movement of the ball 1,500 times per second to give you precise control.
XH1890
$88



DSE
Precise Mouse Pad - TUX
Advanced anti-static mouse pad with super-thin surface and excellent tracking control. Easy to clean, uniform reflective surface plus anti-skid backing to grip virtually any working surface.
XH8279
$7.77

DSE
Wrist Rest Mouse Pad
Designed to eliminate any strain on your wrist. Makes using your mouse more comfortable for extended periods.
XH5021
$13.27

DSE
Drawing Tablet
6"x4.5" Digitizer drawing kit with wireless mouse & wireless pressure sensitive pen.
XH1913
$78.76

DSE
Keyboard
This PS/2 keyboard makes an ideal replacement. Features a tactile silicone membrane for long life and 3 power management keys.
XH3442
$15.47

DSE
Internet Keyboard
Be more productive with this PS/2 Internet keyboard. Features include one-touch access to Internet, power management and audio functions.
XH3443
$26

DSE
Ergonomic Keyboard
PS/2 ergonomic design for professional use. Features 7 one-touch internet access keys and 3D ergonomic design.
XH5116
$44

Microsoft Digital Media Pro
This keyboard is an easy to use ergonomic keyboard that has 5 customisable buttons which provide one-key access to your favourite Web sites and files
XH3558
$58.98

Microsoft Wireless Desktop Standard
This affordable set offers the convenience of wireless functionality and precision of an optical mouse. Programmable hot keys and faster wheel scrolling make navigation a snap.
XH6243
$128

Microsoft Wireless Optical Desktop
Ergonomic set - comfort curve design keyboard. Zoom slider. customisable "my favourites" keys, media center, hot keys provide one-touch access, wireless optical mouse with Tilt Wheel ensures accuracy.
XH1945
$178

DSE
Numeric Keypad
USB - for notebooks or desktops.
XH5124
$41

DSE **17" TFT LCD Display**

Features 500:1 contrast radio for clear images and resolutions up to 1280x1024 @ 75Hz. With a 16ms response time and built in speakers it's great for multimedia applications. XC5592

$424

DSE **19" TFT LCD Display**

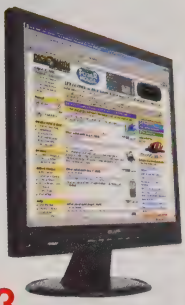
Features 500:1 contrast radio for clear images and resolutions up to 1280x1024 @ 75Hz. With a 16ms response time and built in speakers it's ideal for multimedia applications. XC5593

$577

PHILIPS

17" TFT 170S5FB

Resolutions up to 1280 x 1024. Fast 16ms response and anti-glare panel ideal for gaming and video. Other features include 450:1 contrast, 250cd/m² brightness, optional VESA wall mounting & more. XC6304

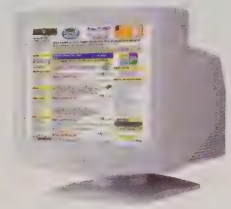


$473

DSE **Monitor 17" Flat CRT**

17" auto scan monitor with anti-glare & anti-static high contrast screen coating to reduce reflection and dust attraction. Displays sharp images, text and graphics up to 1280x1024 with OSD, easy VESA DCC setup, TCO99 compliance & 3 year RTB warranty. XC6248

$198



DSE **Monitor 19" Flat CRT**

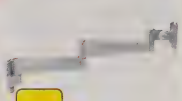
This FLAT 19" monitor has advanced on-screen display (OSD) for easy control. It has a crisp picture with sharp 0.25mm dot pitch and supports resolutions of up to 1600x1200. Supplied with 3 year warranty. XC6270

$298

DSE **TFT-TV Bracket**

Universal wall mount bracket, suitable for wide range of TFT, LCD, TFT-TV displays that utilise industry standard VESA 75x75 or 100x100 mounting. Short reach 13cm model, ideal for tight installations. XC6246

$49.54



DSE **TFT-TV Bracket VESA 68cm**

Universal wall mount bracket, suitable for wide range of TFT, LCD, TFT-TV displays that utilise industry standard VESA 75x75 or 100x100 mounting. Long reach 68cm model, ideal for desk/office installations. XC6271

$79.87

VGA Monitor Cable

High density male connectors each end. Connects 15 pin VGA monitor to 15 pin VGA card. 2 metres, 15 male - 15 male. X8405

$14.54

VGA Monitor Extension Cable

With 15-pin high-density connectors at each end. Suits VGA monitors. 2 metres, 15 female - 15 male. X2603

$9.87

XVGA Cable

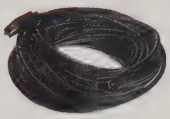
High quality XVGA cable, 2 metres 15-pin male to 15-pin male. XH6790

$24.81

XVGA Extension Cable 2M

High quality XVGA extension cable, 2 metres 15-pin male to 15-pin female. XH6789

$21.86



XVGA Extension Cable, 20 metres

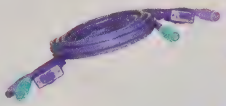
High quality XVGA extension cable, 20 metres 15-pin male to 15-pin female. XH8288

$39.82

DSE **Auto KVM Switch**

Control 2 PC's from 1 kbd/ mouse/monitor. Switch between PCs by simply pressing a key sequence or set to auto-scan from 5 sec - 30 sec. XH4512

$67



KVM Cable Set 1.8m

1.8m cable set comprising of a PS/2 male to male mouse connector, PS/2 male to male keyboard connector and 15 pin male to female Video connector. Suitable for use with automatic DSE KVM switch box. XH3276

$29.87

DSE **Cable KVM 1.8M**

1.8m cable set comprising of a PS/2 male to male mouse connector, PS/2 male to male keyboard connector and 15 pin male to male Video connector. Suitable for use with Manual DSE KVM switch box. XH3328

$27.68

DSE **Adaptor Keyboard AT-PS/2**

This adaptor allows PC/AT keyboards fitted with the large 5-pin DIN plug to connect to computers having the newer PS/2 style 6-pin mini-DIN socket. X8207

$9.87

DSE **Adaptor Keyboard PS/2-AT**

Allows a PS/2 - style keyboard, fitted with a 6-pin mini-DIN plug to connect to a computer having a PC/AT - style, 5-pin DIN socket. X8222

$9.87

XH3291	DSE 1m Cat 6 Network Cable	$9.87	XH3295	DSE 1m Cat 6 Crossover Cable	$9.87
XH3292	DSE 3m Cat 6 Network Cable	$14.87	XH3296	DSE 3m Cat 6 Crossover Cable	$14.87
XH3293	DSE 5m Cat 6 Network Cable	$19.87	XH3297	DSE 5m Cat 6 Crossover Cable	$19.87
XH3294	DSE 10m Cat 6 Network Cable	$29.87	XH3298	DSE 10m Cat 6 Crossover Cable	$29.87
XH3251	DSE 20m Cat 6 Network Cable	$39.87	XH3253	DSE 20m Cat 6 Crossover Cable	$39.87
XH3252	DSE 30m Cat 6 Network Cable	$49.87	XH3254	DSE 30m Cat 6 Crossover Cable	$49.87

DSE USB Cable 2.0 1m A A GOLD

1 metre A male to A female. Gold plated copper contacts for superior conductivity.

XH6793 $10.54

DSE USB Cable 2.0 1m A B GOLD

1 metre A male to B male. Gold plated copper contacts for superior conductivity.

XH6791 $10.54

DSE H1 USB 2.0 2m Cable AA Blue

A-A, lights up blue when connected.

XH8179 $18.56

DSE USB 2.0 2m Cable AB Blue

A-B, lights up blue when connected

XH8178 $14.26

DSE USB Cable 2.0 3m AB Gold

A male to B male. Gold plated copper contacts for superior conductivity.

XH6792 $14.77

DSE USB Cable 2.0 Active Extension

A/A cables are designed to extend the reach of your existing USB A/B cable

XH8199 $36.11

DSE Mini USB Cable 4Pin 1.8m

Transfer data between your digital camera and your PC.

XH3363 $9.87

DSE Mini USB Cable 5Pin 1.8m

Transfer data between your digital camera and your PC.

XH3362 $9.87

DSE USB 2.0 Network Cable

Transfer files & data between Windows PC's at up to 480Mbps!

XH8177 $38

DSE USB 1.1 Backplane Extension Kit

Add USB sockets to your PC.

XH3243 $14.87

DSE USB 2.0 to iPod Cable

Transfers data between your iPod and PC.

XH8256 $18.71

DSE Cable IEEE1394 to iPod

Transfers data between your iPod and PC.

XH8257 $19.26

DSE Cable IEEE1394 4P to 4P

A 2 metre 4 Pin to 4 Pin IEEE1394 or FireWire cable. PC and Mac.

XH3264 $19.87

DSE Cable IEEE1394 6P to 4P

A 1.8 metre 6 pin to 4 Pin IEEE1394 or FireWire cable. PV and Mac.

XH3262 $19.87

DSE Cable IEEE1394 6P to 6P

A 1.6m 6 Pin to 6 Pin IEEE1394 or FireWire cable.

XH3265 $19.87

DSE Printer Cable 25M-Cent 2m

Quality shielded cable that suits all standard parallel, EPP and ECP devices.

X8614 $14.54

DSE Printer Cable 25M-Cent 5m

Quality shielded cable that suits all standard parallel, EPP and ECP devices.

X8619 $19.21

DSE Printer Cable IEEE1284 2m

This is a high quality 2 metre IEEE1284 printer cable.

XH3205 $19.87

DSE SATA Cable 17cm - Power

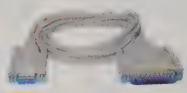
Power cable for Serial ATA hard drives.

XH6801 $7.16

DSE SATA Cable 50cm - Data

Data cable for Serial ATA hard drives.

XH6800 $8.66



DSE Serial Cable 2m 9 pin Female - 25 pin Male

Serial cable DB9 Female to DB25 Male.

X8007 $9.87

DSE Serial Cable 2m 9 pin Female - 9 pin Female

Serial cable DB9 Female to DB9 Female.

X8406 $14.54

DSE 2m Serial Extension Cable

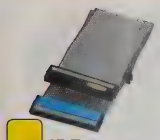
Serial 2m Extension.

X2610 $9.87

DSE PS/2 Extension Cable 2m

2m P/S keyboard or mouse extension.

X2601 $9.87



DSE **IDE Cable UDMA 66/100MHz**
IDE DMA 66/100 Cable.
XH3244
$14.87

DSE **Disk Drive Power Splitter**
Splits one Molex 5.25" male connector to 2 female sockets.
X2604
$9.87

DSE **CDROM Audio Cable**
CDROM Audio cable.
XH8293
$8.64

DSE **CPU Fan Power Splitter**
Provide power to additional CPU, chipset or case fans.
XH7974
$5.26

DSE **WLAN RP-SMA Cable**
Connect high-gain antenna's to 802.11x WLAN devices
XH6836
$13.23

Universal IDE Cable
IDE cable fitted with DIL socket connectors. Suitable for all IDE devices
X5472
$9.87

DSE **Adaptor RS-232 9F-25M**
Serial data adaptor to convert a DB25 female socket into a DB9 female socket.
X2660
$9.87

DSE **Adaptor RS232 9M - 25F**
Serial data adaptor to convert a DB25 male plug into a DB9 male plug.
X2661
$9.87

DSE **Gender Changer 25F-25F**
Gender changer DB25 Female to DB25 Female.
X2677
$9.87

DSE **Gender Changer 25M-25M**
Gender changer DB25 Male to DB25 Male.
X2678
$9.87

DSE **Gender Changer 9F-9F**
Gender changer DB9 Female to DB9 Female.
X2675
$9.87

DSE **Gender Changer 9M-9M**
Gender changer DB9 Male to DB9 Male.
X2676
$9.87

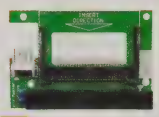
DSE **Adaptor DVI-A to VGA**
DVI-A to DB15M VGA Adaptor.
XH6788
$9.84

DSE **PS/2 'Y' Adaptor**
For notebooks that support dual PS/2 devices but supply only one port.
XH3266
$9.87

DSE **RJ45 Joiner**
RJ45 adaptor to join two Cat 5/5e/6 10/100Mbps cables .
XH4232
$14.53

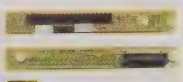
DSE **VGA Y Adaptor**
Allows you to connect 2 monitors to your PC.
XH4242
$8.46

DSE **Serial Infrared Adaptor**
Adds Infrared port to PC's with Serial port.
XH6457
$61.37



DSE **Compact Flash to IDE Adaptor**
Allows you to connect a Compact Flash card to the standard PC IDE bus.
XH4137
$29.63

DSE **Data / Voice Splitter**
Splits single 8 wire RJ45 outlet to data and voice.
XH4248
$14.24



DSE **Slim CD-ROM Adaptor**
Convert a notebook CD-Rom, CD-RW, DVD or DVD-RW drive.
XH4133
$11.63

DSE **SATA Adaptor**
Serial ATA to Ultra ATA-133 adaptor.
XH6799
$51.24

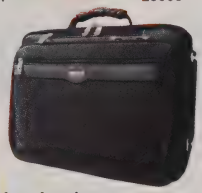
DSE **USB Serial HUB EPP Adaptor**
Adds one high-speed serial port, one printer port, and 2 downstream USB ports.
XH4294
$76.38

Mindex Laptop Lock Down
Lock your laptop/notebook computer to your desk with this padlock and cable.
L8603
$34.88

Laptop Security Lock MDXRL2
Lock your laptop/notebook computer to your desk with this padlock and cable.
L9500
$49.84

DSE **Notebook Bag Pack**
Shock absorbing padding, heavy duty strap, non skid feet. Suits up to 15" screen.
XH6156
$59.98

TARGUS 15" Notebook Bag
Ideal for notebooks with a screen. Size up to 15".
X6648
$69.87



DSE **Notebook Bag 17" EC-849A**
Ideal for notebooks with a screen size up to 17".
XH6152
$69.98

DSE **Notebook Carry Bag SO481**
Accepts a wide range of notebooks up to 15.4".
XH6162
$98

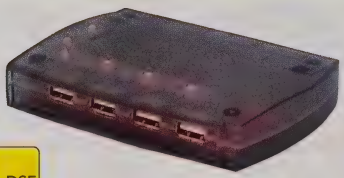
DSE

USB Serial HUB EPP Adaptor

Adds one high-speed serial port, one printer port, and 2 downstream USB ports.

XH4294

$76.38



DSE

USB 1.1 HUB

Four high speed USB ports, optimised for use with the printers, scanners, digital cameras, and other USB devices. With simple plug & play installation for fast and easy set-up this hub supports up to 127 hot-swappable USB peripherals!

XH7931

$38

DSE

USB 2.0 Dock

This USB2.0 Dock adds four additional USB ports to your computer. Its pocket-size design, built-in hidden 16cm USB cable and support for all major operating systems makes it an ideal USB pocket hub / dock solution!

XH4300

$45.62

DSE

USB 2.0 Dock PS/2

This USB2.0 Dock allows you to connect a legacy PS/2 device and adds 3 additional USB2.0 ports to your computer. Its pocket-size design, built-in hidden 16cm USB cable and support for all major operating systems makes it an ideal pocket solution. XH4301

$56.48

DSE

USB 2.0 Dock PS/2 10/100

With its small footprint adding 2x PS/2 ports, a serial port, a parallel printer port, 3x USB2.0 ports as well as a 10/100 Ethernet port complete with bundled Windows 98/ Me/ 2000/ XP, MacOS9.2+ and Linux 2.4.x+ drivers, it is the dock of professionals.

XH4303

$146

DSE

USB 2.0 Dock PS/2 802.11g

The USB2.0 Dock connects to a PC or notebook via the Universal Serial Bus (USB). It provides one high-speed RS-232 serial port, one printer port, two PS/2 ports, 3 USB2.0 ports and has a built-in IEEE 802.11g Wireless LAN adaptor.

XH4304

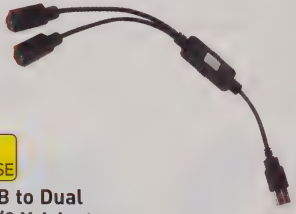
$158

DSE

USB 2.0 HUB

This 2 port USB hub supports High-speed (USB2.0 - 480Mbps), Full-speed (USB1.1 - 12Mbps), and Low-speed (USB1.1 - 1.5Mbps) transfer rates. Includes LED indicators and is suitable for low power USB devices. Works with USB Windows, Mac and Linux computers. XH6777

$37.86



DSE

USB to Dual PS/2 Y Adaptor

The DSE USB to Dual PS/2 Adaptor allows you to connect both your PS/2 mouse and keyboard to one USB port.

XH6809

$26

DSE

Adaptor USB to Ethernet

The USB 2.0 to 10/100Mbps adaptor is a Fast Ethernet Adaptor that provides plug-and-play 10/100Mbps dual speed full duplex Ethernet connection for PCs and notebooks.

XH8273

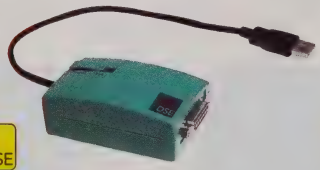
$52

DSE

Serial USB Adaptor

This tiny USB to serial adaptor is perfect for Legacy free desktop and notebook computers. Supports 300baud ~ 920K baud & hardware flow control. Requires no external power supply. Compatible with Windows 98, Me, 2000, XP, Mac OS, & Linux. XH8290

$31.23



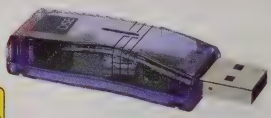
DSE

Adaptor USB - PC Gameport

The USB to PC Gameport Converter enables the use of older analog joysticks and game controllers with newer computers that no longer have legacy ports.

XH8284

$21



DSE

Adaptor USB 2.0 to IrDA

The DSE USB2.0 to IrDA Adaptor offers an IrDA-compliant bridge device enabling infrared wireless data communications between notebooks, peripherals and desktop computers. It provides both SIR and FIR data rates up to 4 Mbits per second.

XH8286

$46.38

DSE

USB FM Sender

Turns your notebook or desktop into FM Stereo Radio Station! Easy to use, 4 preset channels and works with Windows, Mac and Linux computers.
XH1927

$67.27

AudiMax USB Audio Adaptor for PC & Mac

This easy to install USB audio adaptor adds 5.1/6 channel audio to notebook and desktop PC's. Features an internal echo-cancelling mic, external mic-in, optical S/P DIF out, headphone out and a line-in port. Works with Windows 98se/ ME/200/XP. XH1938

$88

DSE

3.5" Removable Rack & Tray

This 3.5" mobile rack & tray provides a removable hard drive solution. Supports IDE DMA/66 standards and is easy to install. A great way to move data to and from home and work!
XH5067

DSE 3.5" Removable Tray XH5068 $17.33

$26.24

DSE

Internal Combo Drive (CD Writer/DVD Reader)

A reliable, high-performance CD rewriter and CD/ DVD reader. This versatile drive can write to CD-R (recordable CD) media, write to high-speed CD-RW (re-writeable CD) media, read CD-ROM and CD-R/RW media and read DVD discs. XH8341

$98

DSE

External Combo Drive (CD Writer/DVD Reader)

A reliable, high-performance CD rewriter and CD/ DVD reader. This versatile drive can write to CD-R (recordable CD) media, write to high-speed CD-RW (re-writeable CD) media, read CD-ROM, CD-R/RW media and DVD discs. XH8340

$198

CYBER DRIVE

DVD ReWriter DX162

Dual format 16x DVD Writer for both DVD+R & DVD-R. Dual layer & writes up to 8.5GB with appropriate media. Suitable for Windows, Mac and Linux computers with IDE/ATAPI interface and a spare 5.25" drive bay. Supplied with Windows application software only. XH4140

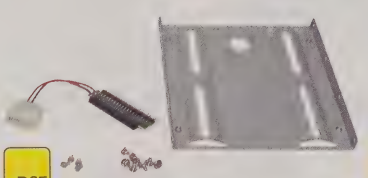
$148

DSE

External Dual Mode/Layer DVD ReWriter (16x)

This external 16x Double Layer, Dual Format DVD ReWriter is an easy to install solution for notebook and desktop computers. It enables you to play and create your own CDs and DVDs. Supports writing to 8.5GB DVD discs & burning speeds up to 16x! XH8342

$248



DSE

Drive Adaptor 2.5" - 3.5"

This mounting kit is for mounting 2.5" notebook type hard drives into 3.5" drive bays. Includes tray, adaptor & mounting screws.
XH6905

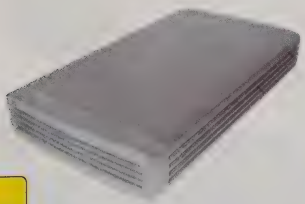
$18

DSE

Drive Mounting Kit 3.5"

Ideal for installing 3.5" drives into 5.25" drive bays. this model suits Zip, Floppy, LS120, Tape and other 3.5" drives...
XH5062

$7

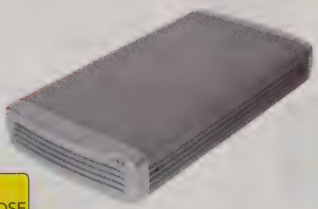


DSE

3.5" Drive Case USB 2.0 and Firewire

USB 2.0 & Firewire Case for 3.5" HDD's.
XH6818

$153



DSE

2.5" Drive Case USB 2.0

USB 2.0 Case for notebook HDD's
XH6768

$58

DSE

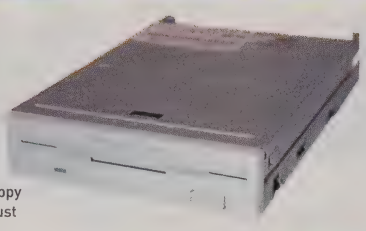
5.25" Drive Case USB 2.0

USB 2.0 Case for CDRW, DVD, Etc
XH6734

$114

DSE

3.5" Floppy Disk Drive



Having problems reading or writing disks? This 3.5" Floppy Disk Drive may be just what you need... XH5308

Drive Mounting Kit 5.25" XH5063 $5.48

$28.77

DSE

USB Floppy Disk Drive v2

This USB Floppy Disk Drive connects to an available USB port on your desktop PC or notebook. It reads and writes to 3.5" disks at double the speed of normal floppy disks drives and is compatible with most computers in-use today. XH8291

$62.91

Western Digital

Hard Disk Drive IDE

WD Caviar 7200 hard drives are the performance champions for advanced desktop personal computers.

80GB Hard Disk Drive	XH7081
120GB Hard Disk Drive	XH7079
160GB Hard Disk Drive	XH7089

Visit www.dse.co.nz for latest pricing

Western Digital

160GB SATA Hard Drive

160GB Western Digital SATA Hard Drives - ideal for RAID installations where speed and or data integrity is a must. Each drives features 8MB cache, 7200rpm and buffer to host transfer rates up to 1,200Mbits/s! XH7094

$198

DSE

USB 2.0 PocketDrive

DSE PocketDrive is a portable USB storage device for desktop and notebook computers. When connected it appears in your file browser as another drive allowing you to read, write, copy, delete and drag-n-drop data to and from other drives.

USB 2.0 PocketDrive 20GB	XH8253
USB 2.0 PocketDrive 40GB	XH8255

Visit www.dse.co.nz for latest pricing

DSE

USB MicroDrive

Easy to install. Allows you to store and move data between Mac, Windows and Linux computers. Works like any other drive supporting drag-n-drop etc. Includes security software for Windows to encrypt your most important data.

USB 128MB MicroDrive	XH8250
USB 256MB MicroDrive	XH8251
USB 512MB MicroDrive	XH8252
USB 1GB MicroDrive	XH8306

Visit www.dse.co.nz for latest pricing

imation

Flash Drive Mini

Compact, affordable solution for everyday file sharing. Featuring an all-in-one swivel cap design that protects the drive and eliminates lost caps.

Flash Drive Mini 128MB	XH8414
Flash Drive Mini 256MB	XH8415
Flash Drive Mini 512MB	XH8416

Visit www.dse.co.nz for latest pricing

imation

USB Flash Drive

This compact USB 2.0 flash drive features a patented "never lose" the cap swivel design. Weighing only 22 grams it's suitable for computers running USB capable versions of the Windows, Mac and Linux operating systems.

128MB USB Flash Drive	XH8410
256MB USB Flash Drive	XH8411
512MB USB Flash Drive	XH8412

Visit www.dse.co.nz for latest pricing

DSE

Digital MP3 Player 128MB

Black rubberised and chrome casing, voice recording, LCD with backlight, ID3 display, plug and play flash drive, push out USB plug.
A2283

$78

DSE

MP3/WMA Player

Portable MP3 and WMA digital audio player with LCD display and integrated voice recorder. Complete with a built-in microphone, it allows you to to create voice memos, record lectures/speeches and listen to music while on the move.

MP3/WMA Player 512MB A2365 $188

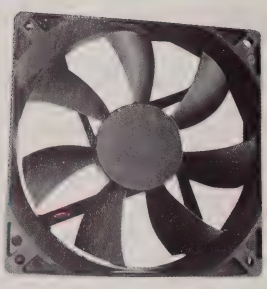
MP3/WMA Player 1.0GB A2366 $298

TITAN

Titan 120mm Case Fan

120mm ATX case fan ideal for those who overclock their CPU or for PC's running as a server.
XH6438

$13



TITAN

Titan CPU Cooler AMD XP3200

Titan CPU Cooler Socket A/Socket 370, up to XP3200+, Copper, 1 ball bearing fan.
XH6846

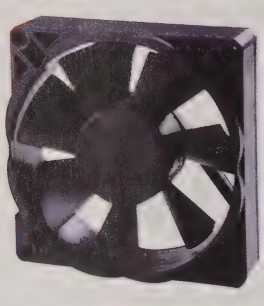
$35.64

TITAN

Titan 80mm Case Fan

80mm ATX case fan ideal for those who overclock their CPU or for PC's running as a server.
XH6437

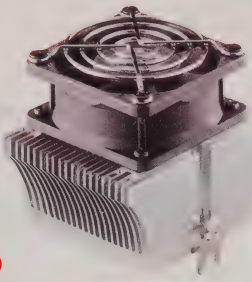
$8



Socket A CPU Cooler

CPU cooler, for all Intel PIII Coppermine & Tualatin, Celeron & CeleronII, AMD Duron / Thunderbird (Socket A / 462) up to 1.7 GHz, Athlon XP 1800+
XH6434

$16



TITAN

Titan Case Fan 80mm Blue LED

The crystal frame fan has 3 blue LEDs for an eye-catching performance. Comes with a transparent case for the ultimate in colour display.
XH6804

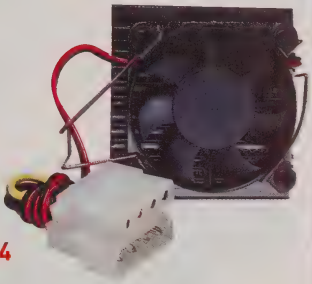
$17

DSE

Socket 5 CPU Cooler

Suits 586 Pentium. Essential cooling fan for all Pentium CPUs to avoid overheating.
X7707

$14.54



TITAN

Titan Case Fan 80mm Rainbow

The crystal frame fan has 3 LEDs (Red, Green & Blue) for an eye-catching performance. Comes with a transparent case for the ultimate in colour display.
XH6805

$16

TITAN

Titan Chipset Cooler

For VGA / Motherboard chipsets.
XH6806

$22

TITAN

Titan 60mm Case Fan

60mm ATX case fan ideal for those who overclock their CPU or for PC's running as a server.
XH6439

$7

DSE

System Cooler

Is your PC running hot? Simply add this slot extractor fan to cool things down.
XH5088

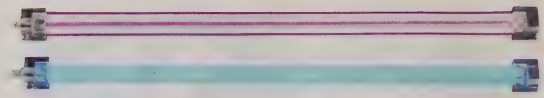
$17

Flexiglow PC "Lazer" Beam Kit

3 super bright LEDs mounted in 3 separate translucent housings with focal beam magnifiers and swivel bases, with 12V DC Driver and 'On', 'Off' and 'Flash' function switch. Can be connected to a number of optional extra accessories.

Z8060 Blue Z8061 Green
Z8062 Red Z8063 U/V

$24.88 ea



Flexiglow Lighting Single CCFL Neon 12" U/V Kit

Single 300mm Flexiglow Ultraviolet Cold Cathode Fluorescence Lighting Tube Kit pack with instruction manual and external inverter that allows connection up to two tubes and to a number of optional extra components.

Z8043

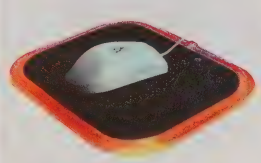
$29.84

Flexiglow Lighting Single CCFL Neon 12" Blue Kit

Single 300mm Flexiglow Blue Cold Cathode Fluorescence Lighting Tube Kit pack with instruction manual and external inverter that allows connection up to two tubes and to a number of optional extra components.

Z8040

$29.84



Flexiglow Illuminated FX PC Mouse Pad

Flexiglow PC FX Gaming Mouse pad that takes extreme gaming to a new level as well as providing that last finishing touch in modding your PC. Z8400

$34.88

Flexiglow Car Cigarette Lighter Plug Adaptor

Car cigarette lighter plug adaptor with mini Molex attachment that allows connection to the range of Flexiglow 12V DC lighting products. Z8100

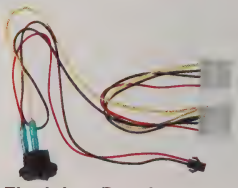
$9.88

Flexiglow Sonic Driver with Volume Control

12V DC driver with volume/sensitivity adjustment to allow Flexiglow illumination to beat to music or sound.

Z8103

$12.88



Flexiglow Panel Switch with PC Power Connecting Harness

Rocker switch with snap-in fitting, two Molex PC power connectors and a mini Molex plug for attaching Flexiglow 12V DC lighting products to PCs. Z8101

$6.88

DSE

300W ATX Power Supply

This big 300W power supply is just what you need for those BIG AMD processors. Provides up to a massive 20A @ on the 5V rail and up to 14A on the 3.3v rail. XH6903

$71

DSE

400W P4/ Athlon Supply

Ideal for high end P4 & Athlon computers. Advanced features include dual ball-bearing fans, fan monitor output, massive 28A @ 3.3V, 115/230VAC switchable, 6x 5.25" & 2x3.5" drive power outlets and Aux + 12V outlets. Supplied complete with IEC power lead. XH6906

$97

MGE Nova AVR 600 UPS

The Nova AVR range of UPS units provide the user with cost-effective and rugged protection against electrical interference and power outages.

M7659

$248

MGE Centralion Blazer 600 UPS

The Centralion Blazer 600 is equipped with Boost and Buck AVR to stabilise input voltage and microprocessor control guarantees high reliability.

M7661

$128

Adding a card to an existing PC is a great way to expand the functionality of the machine, especially in older computers that may not have certain technologies like USB or Firewire built in.

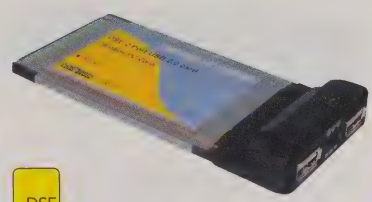
By simply adding a card you could get additional USB ports, IEEE1394 capability, enhanced hard drive technologies like Serial ATA (SATA) or RAID, without the hassle and expense of upgrading motherboards or whole PC's.

DSE

PCI USB 1 Card

2x USB 1 ports for PC/MAC.
XH6646

$27.32

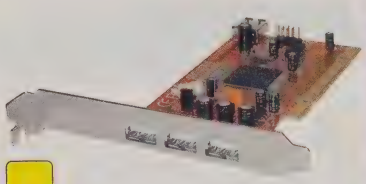


DSE

CardBus USB 2 Card

USB 2.0 Card-Bus PCMCIA Adapter 2-Port.
XH6739

$57.28

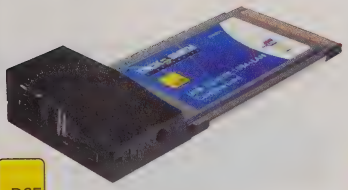


DSE

PCI USB 2.0 Card

Supports USB 2.0, USB1.1 & USB 1.0 - up to 480Mbps!
XH6738

$34.48

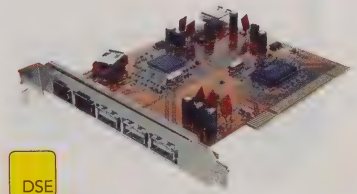


DSE

CardBus Card USB 2.0 1394

This CardBus PC Card is specially designed to connect USB devices to any Notebook computer with CardBus slots. It also integrates a Firewire (IEEE1394a) port as well as a 10/100 LAN port.
XH8271

$98.36



DSE

PCI Card USB 2.0 IEEE1394

This PCI card integrates two of the most powerful interfaces (USB2.0 & IEEE1394) on a single PCI card. It is an ideal solution for connecting your PC to USB / IEEE1394 devices in a single-step upgrade.
XH8270

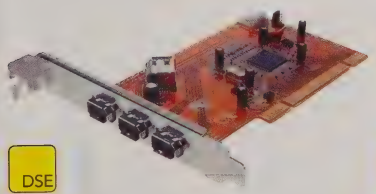
$93.73

DSE

CardBus Card IEEE1394 V2

An easy way to add Digital Video editing to notebooks running Mac, Linux or Windows! Supplied with Windows DV editing software only, DV cable and fully IEEE1394 compliant.
XH6808

$63.27

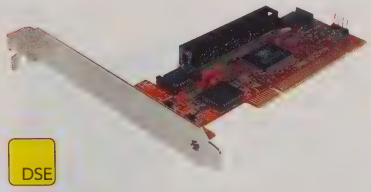


DSE

PCI Card IEEE1394 3 Port

The DSE 3 Port IEEE1394 PCI Card gives you the ability to connect high-speed IEEE1394 multimedia/consumer devices to your computer. Such devices include Digital Video camcorders, scanners, hard-drives and DVD-Writers. Supports Windows, MacOS and Linux!
XH8268

$33.26

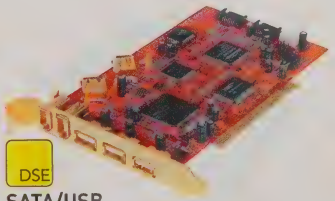


DSE

PCI Card SATA + IDE RAID

The DSE Serial ATA and Parallel ATA PCI combo PCI Controller is designed to support 2 Serial ATA hard drives and 2 Parallel ATA (IDE) hard drives with RAID 0 (striping), RAID 1 (mirroring) or RAID 1+0.
XH8269

$47.64



DSE

SATA/USB 2.0/DV (IEEE1394) PCI Card

Power-packed PCI card adds Serial ATA (1.5Gbps), USB 2.0 (480Mbps) & IEEE1394 (400Mbps) - take advantage of fast connection speeds to Hard Disk Drives, Digital Still & Video Camera's, Etc. Supports RAID 0/1 & is backward compatible with USB 1. XH6814

$138

DICK SMITH ELECTRONICS That's where you go!

About Wireless networks

WiFi, or wireless fidelity, is freedom: it allows you to connect to the internet and other networked devices from your couch at home, a bed, in a hotel room at work without wires. How? WiFi is a wireless technology like a cellphone. WiFi enabled computers send and receive data indoors and out; anywhere within the range of a base station. And the best thing of all, it's fast. The current standards most commonly used for WiFi hardware are: 802.11b (up to 11Mbps) and 802.11g (up to 54Mbps). The speeds obtained depend on the operating environment, and factors such as distance and obstacles play a large role. Some wireless devices can be set as bridges or repeaters to increase the distance of wireless networks. Boosters and tuned antennas can be added to products for the same effect. Find out more instore.

DSE

DSE 802.11g CardBus Card

Incorporating the latest IEEE 802.11g (54Mbps) technology, while maintaining backwards compatibility with 802.11b (11Mbps) devices, the DSE 802.11g CardBus Card supports both WEP and WPA wireless security, making it the ideal choice for notebook PC's. XH8345

$54

DSE

DSE 802.11g USB Adaptor

Incorporating the latest IEEE 802.11g (54Mbps) technology, while maintaining backwards compatibility with 802.11b (11Mbps) devices, the DSE 802.11g USB Adaptor supports WEP, WPA and WPA2 wireless security, making it the ideal choice for all PCs & Macs. XH8344

$58

DSE

DSE 802.11g PCI Card

Incorporating the latest IEEE 802.11g (54Mbps) technology, while maintaining backwards compatibility with 802.11b (11Mbps) devices, the DSE 802.11g PCI Card also supports both WEP and WPA wireless security, making it the ideal choice for desktop PCs. XH8343

$54

DSE

802.11g Access Point v2

This 54Mbps 802.11g Access Point allows users to connect wirelessly to a network. It can also act as an Access Point Client, an Access Point Repeater or a Wireless Bridge. It is great for sharing large files such as digital images and videos. XH8287

$198

DSE

Wireless (802.11g) Broadband Router

Compatible with any type of broadband connection! With support for both 802.11b/802.11g wireless networks, it also functions as a Firewall and USB print server.

XH8346 $138

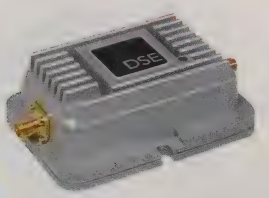
ADSL Router XH1174 $218

Linksys Wireless ADSL Gateway

Wireless broadband router.

XH6343 $198

Wireless ADSL Router 9106 XH6339 $296



DSE

2.4GHz (802.11) Booster - 500mW

Bi-directional 500mW booster with up to +27dBmW transmit & 10dB receive gain. Ideal for 2.4GHz ISM band devices such as 802.11b / 802.11g wireless AccessPoints, broadband routers and R/F cards & adaptors. XH8348

$298

DSE

WiFi HotSpot Locator

This credit card sized device enables you to easily find a WiFi HotSpot. Detects 802.11b & 802.11g WiFi networks within a range of up to 150m. One press button operation with signal strength meter. XH8280

$44.32

DSE

Antenna 2.4GHz Dipole 7dBi

This high gain antenna is suitable for 802.11b/g Wireless access points, bridges, routers & NIC's which support an external RP-SMA antenna connection. Supplied with 1.4m of low-loss RG316 coax fitted with RP-SMA connector for ease of installation. XH8136

$52.73

Computer Networking

It's all about sharing resources!

With a computer network you are able to share resources – like files, printers, internet access, etc. Networks can be simple like connecting two PC's for gaming or complicated like global multi-office installations.

If you are new to networking, here are some important things to consider:

- Each computer requires a NIC (Network Interface Card) – in many newer computers, the NIC is built into the motherboard – on older computers you will need to add one.
- Local Area Network (LAN) – The most common form of wired network. Depending on the cabling you use it can support 10Mbps, 100Mbps or even 1000Mbps.
- Wireless Networks (WLAN) – Take the fuss out of cabling. The current standards most commonly used for Wifi hardware are 802.11b (up to 11Mbps) and 802.11g standard (up to 54Mbps). If you are considering wireless, look for the WiFi logo. WiFi is an international standard which means the products you are buying have been tested by an international organisation and are compatible with each other.
- To connect your network to the internet you need a router. This device provides a bridge between the LAN and the internet (WAN).
- Bluetooth is a form of low speed, short range wireless network. It is ideal for computer peripherals like headsets, keyboards, syncing your cellphone or PDA address book etc .

DSE

5 Port 10/100Mbps Switch

This 5 port 10/100Mbps duplex Fast Ethernet switch is ideal for home, education or office use. Works with patch or crossover cables and includes support for QoS and other multimedia applications.

XH8258

$69.98

DSE

8 Port 10/100Mbps Switch

This 8 port 10/100Mbps duplex Fast Ethernet switch is ideal for home, education or office use. Works with patch or crossover cables and includes support for QoS and other multimedia applications.

XH8259

$93.72

DSE

16-Port 10/100Mbps Switch

This 10/100Mbps 16-port N-Way managed Switch is a multi-speed, versatile network device with several advanced features that will help in establishing a reliable, flexible and high performance network. It supports IEEE 802.1p, QoS, Auto MDI/MDIX and more.

XH8260

$167

DSE

Switch 10/100 24 Port v2

This 10/100Mbps 24-port N-Way managed Switch is a multi-speed, versatile network device with several advanced features that will help in establishing a reliable, flexible and high performance network. It supports IEEE 802.1p, QoS, Auto MDI/MDIX and more

XH8261

$212

DSE

DSE GigaSwitch 5 Port

5 port Gigabit Ethernet switch for heavy network loads like graphics, multimedia and large files. Maximum switching bandwidth of up to 10Gbps, works with patch or crossover cables and includes support for QoS and other multimedia applications.

XH8263

$188

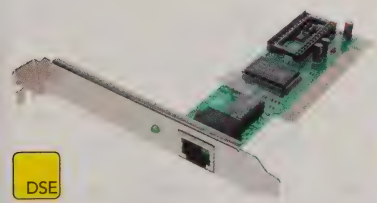
DSE

CardBus Card 10/100Mbps

The DSE CardBus Card 10/ 100Mbps is a credit card size Fast-Ethernet adapter that connects a notebook with a CardBus slot to an Ethernet (IEEE 802.3) or Fast Ethernet (IEEE 802.3u) network.

XH8267

$38.24



DSE

PCI Card 10/100Mbps

This PCI card provides the easiest way to upgrade a network from 10 to 100Mbps. It also supports WOL, ACPI and full-duplex operation for up to 200Mbps bandwidth. Supplied with Windows, Unix and Netware drivers.

XH8265

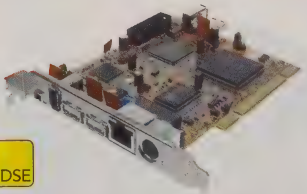
$15.26

DSE

PCI Card 10/100/1000Mbps

The DSE PCI Card 10/100/1000Mbps network adapter provides you with an easy way to upgrade your network from 10/100Mbps to 1000Mbps while maintaining compatibility with 10/100Mbps. It has support for NetWare, Linux and all versions of Windows! XH8266

$43.76



DSE

PCI Card USB 1394 GigaLAN

The DSE USB 2.0 + 1394a and Giga LAN Combo PCI card combines three powerful technologies giving you the ability to connect both USB and IEEE1394 multimedia/consumer devices to your computer while also adding the ability to connect to a GigaBit Ethernet.

XH8272

$118

DICK SMITH ELECTRONICS That's where you go!

About ADSL (High Speed Internet)

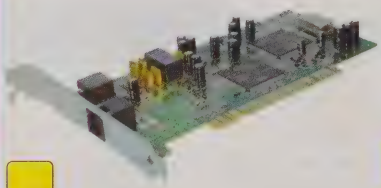
ADSL technology allows you to connect your computer/s to the internet at speeds much faster than dial-up modems. It combines both your digital and voice information at the phone exchange and then sends these signals to your premises via the normal phone lines.

These signals need to be separated at your premises by installing a filter on each phone device OR by installing a permanently wire splitter.

- Filters are user-installable and are stocked by all Dick Smith Electronics stores.
- Splitters are professionally installed. You can choose to pay for a professional to install a splitter.
- A filter is required for each phone device connected to your wall outlets (phone, fax, analogue modem, answering machine, alarm dialer etc).
- More than one phone device can be connected to a filter by simply plugging in a double or triple adaptor.

ADSL Facts

- **Blindingly fast internet access** – depending on the plan you choose, and the distance from your home or office to the telephone exchange, the technology supports downloads up to 8Mbps and upload speeds up to 1Mbps. As a comparison, the best dial-up modems only support up to 0.56Mbps!
- **Always on** – imagine, no more dial up delays – turn on the computer and start surfing.
- **Talk and surf at the same time** – no more missing phone calls because someone is on the web.



DSE

DSE PCI ADSL Modem

PCI ADSL Modem for single user installations or dedicated network firewalls.
XH1137

$79.86

DSE

DSE USB ADSL Modem

This easy to connect modem provides a high speed ADSL connection to the telephone line. Fully compliant and approved for use with Telecom's ADSL services and suitable for USB capable Linux, Mac, and Windows computers. XH1172

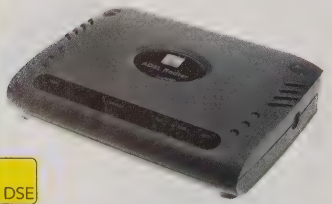
$98.43

DSE

DSE Broadband Router

Full-rate ADSL router with 4-port 10/100Mbps switch. Add an optional DSE WLAN PCMCIA card for complete wired and wireless (802.11b) solution. Suitable for home or office use up to 253 computers. Built in firewall, web blocking, HTTP managed. XH1151

$97.43

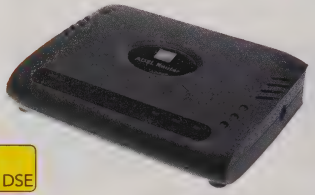


DSE

DSE ADSL Router UTP 1x LAN

This ADSL Router provides a high speed ADSL connection to the telephone line. With its Ethernet connection, it is an ideal high speed Internet solution for a single (TCP/IP enabled) computer. XH1173

$112



DSE

DSE ADSL Router UTP 4x LAN

This ADSL Router provides a high speed ADSL connection to the telephone line. With its 4 port 10/100Mbps Duplex Switch, it is an ideal high speed Internet solution for a network or single (TCP/IP networked) computers. XH1175

$138

DSE

DSE ADSL Router UTP USB

Provides a high speed ADSL connection to the telephone line. Supports simultaneous USB and Ethernet connection and includes a 4 port 10/100Mbps duplex switch. Ideal high speed internet solution for single or TCP/IP networked computers. XH1169

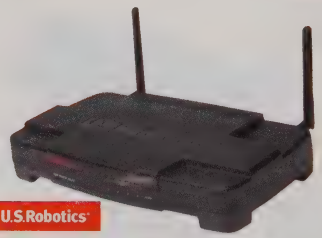
$148

U.S.Robotics

ADSL Router UTP 4x LAN

This ADSL Router provides a high speed ADSL connection to the telephone line. With its 4 port 10/100Mbps Duplex Switch, it is an ideal high speed Internet solution for a network or single (TCP/IP networked) computers. XH8197

$248

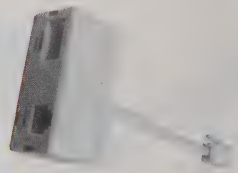


U.S.Robotics

Wireless ADSL Router 9106

ADSL Internet access that easily networks multiple users in any small office or home. Integrated 802.11g wireless access point. XH8198

$348



DSE

DSE ADSL Line Filter BT + RJ11

ADSL filter for all Telecom approved ADSL Modems & Routers sold in New Zealand. Compatible with Telecom's newer 2 wire and older 3 wire wiring practices and is suitable for all types of Telephones.

XH7556 $19.98

XH8556 $19.98

About Dial Up Internet

However you want to connect to the internet we have the solution for you. DSE have a range of modems suitable for most desktop computers or notebooks, from internal PCI to external USB, external serial port or PCMCIA card for notebooks. Many modems also offer the ability to send and receive faxes as well as connecting to the internet. Dial up modems still offer some of the cheapest connections to the internet, at speeds up to 56Kbps.

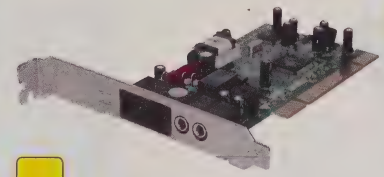
slingshot

VoIP Broadband Phone

IP network telephone based on industry open standards. Built upon innovative technology, Grandstream IP Phone features market leading superb sound quality and rich functionalities at ultra-affordable price.

XH9423

$98



DSE

DSE PCI 56K Modem

Uses Intel chipset with Host Accelerated Modem (HAM) technology to deliver superior performance - compatible with Windows and Linux.

XH1154

$39.98

DSE

Serial 56K Modem

Provides a high performance V.90 solution delivering robust data, fax, and voice features - including full-duplex speakerphone! Ships with Drivers, BitWare for Windows, power adaptor, phone and serial cables.

XH1142

$97.22

slingshot

Slingshot iTalk is an innovative new service that allows users to make and receive phone calls over their broadband connection. The service is designed to offer cheap calling rates and advanced phone features at a fraction of the normal price.

For only $9.95 a month customers receive a second home phone line and benefit from unlimited free calling to other iTalk users. With iTalk you can call anywhere in New Zealand and up to 40 international destinations for only 5 cents per minute. Now that's a serious way to reduce the costs associated with toll calls!

DSE

PCMCIA 56K Modem

Uses the Intel MD566X chipset to provide a cost effective solution for data, fax, and voice applications. Supplied complete with modem drivers and phone cable.

XH1145

$98.72

DSE

USB 56K Modem

Features the latest innovation in high-speed modem design, making electronic communication faster and easier. It is a plug-n-play device which makes it very easy to install.

XH1147

$82

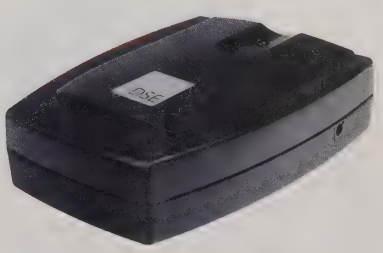
DSE

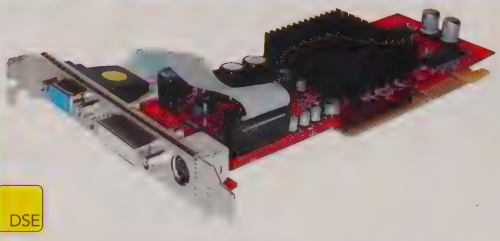
DSE Caller Alert

DSE Caller Alert is an easy to install device that lets you know when someone is trying to get through while you're surfing the web. Works with any analogue modem (56K, Etc). Operation requires Telecom's call waiting service and a telephone.

XH6837

$48





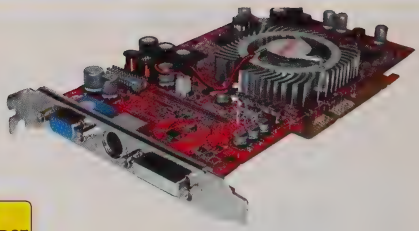
DSE

AGP Card Powercolor 9550se

The RADEON 9550 provides real Microsoft DirectX 9 power to the mainstream and at the same time allows 3D gamers to experience the beauty of next generation graphics.

XH6868

$154



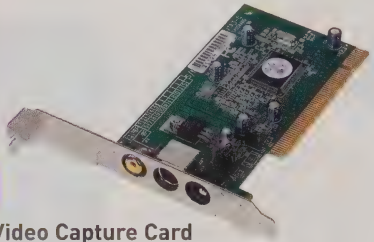
DSE

AGP Card 9800SE 128MB

RADEON 9800 series of visual processors is the most visually advanced 3D performer on the planet, delivering an immersive, cinematic experience for the most demanding next-generation games.

XH6866

$228



DSE

PCI Video Capture Card

32-bit PCI video capture card allows you to connect a video or video camera to your PC. Use it for recording videos digitally, security monitoring, still image capturing and much more. Has S-Video and composite inputs.

XH6594

$81.87

DSE

USB 2.0 Video Capture Adaptor

The DSE USB 2.0 Video Capture Adaptor will allow you to capture video from your VCR, DVD or video camcorder in MPEG I, II, IV or AVI formats. Its Plug & Play USB 2.0 interface makes it easy to install and use. It has Composite Video and S-Video inputs. Includes capture software.

XH3371

$121

DSE

PC to TV Converter

View your PC on a TV! Ideal for mobile and notebooks users. Create professional presentations - connect it to a VCR & create video training tapes - use it anywhere you need the PC on a TV screen. No software drivers required.

XH4624

$128

DSE

4-port Video Splitter

Ideal for running 4 displays from one computer. Works with VGA, SVGA, XGA and Multisync Monitors up to 1920x1440 resolution. Boosts signal up to about 75m.

XH3373

$51.56

DSE

Wireless PC Camera Kit

The DSE Wireless PC Camera Kit is ideal for home security, room and child monitoring. It can also capture video from common sources such as VCRs and DVD players and being a USB device is easy to install. XH3369

$298

DSE

Wireless PC Camera

Ideal spare camera for XH3369. The world's smallest (1/3") CMOS video camera with built-in 2.4GHz wireless A/V sender. Dipole antenna provides optimal video and audio reception.

XH3370

$148

DSE

4.1/5.1 Channel PCI Sound Card

This 32-bit PCI Duplex 4.1/5.1 channel sound card is SoundBlaster, SoundBlaster Pro, DirectSound and DirectMusic compatible. Uses advanced C-Media 8738 chipset and works with Windows 95/98/ME/NT/2000/XP, DOS, BeOS and Linux. RCA and optical SPDIF connectors. XH7847 **$53**

DSE

USB Audio Adaptor for PC & Mac

This easy to install USB audio adaptor adds 5.1/6 channel audio to notebook and desktop PC's. Features an internal echo-cancelling mic, external mic-in, optical S/P DIF out, headphone out and a line-in port. Works with Windows 98se/ME/200/XP. XH1938 **$88**

DSE

USB FM Sender

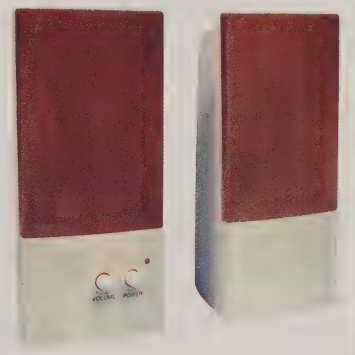
Turns your notebook or desktop into FM Stereo Radio Station! Easy to use, 4 preset channels and works with Windows, Mac and Linux computers. XH1927

$68.27

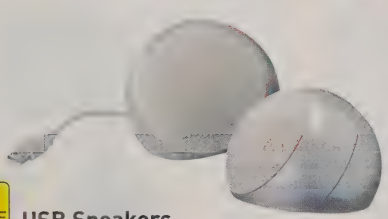
DSE

PC Speakers

A good pair of speakers to enjoy great sound from your PC. 2.4 watts RMS, compact stylish design, and they are magnetically shielded. XH7843



$27



DSE

USB Speakers

USB speakers for desktop or notebook computers. 48KHz sampling for audio playback with 16 bit audio DAC, 27 environment effects, 3 environment sizes, 10-band pre-set equalizer. Up to 0.4W RMS per channel. Works with most versions of Windows, Mac & Linux. XH7869 **$38**

DSE

USB Notebook Speakers

Ideal for notebook computers, these stylish speakers provide up to 0.5W x2 RMS audio, feature easy USB plug-n-play installation and work with most versions of Linux, Mac and Windows. XH7870 **$48**

DSE

PC Speakers with Sub

A powerful 380W sub-woofer speaker complete with 2 x satellite speakers - ideal for use with multimedia PC's, walkman's etc. XH7978 **$54**

Klipsch

Klipsch ProMedia 5.1 PC Speakers

500-watt BASH amplifier and Klipsch engineering offer high output with low distortion and effortless dynamic headroom. XH3566

Order only **$498**

DSE

Multimedia Microphone

This handy noise-cancelling lapel microphone is ideal for Video conferencing, Internet Telephony and other PC microphone applications.
X6067

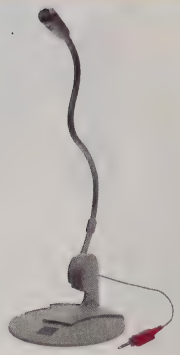
$9.87

DSE

PC Desktop Microphone

The DSE PC Desktop Microphone is a great addition to your desktop system. It features a state-of-the-art noise-cancelling microphone that filters out background noise.
XH8235

$26



DSE

PC Headset Microphone

Gamers and internet users will appreciate the rich, full-range stereo sound of the PC multimedia stereo headset. This headset is perfect for games, music, Internet chat, telephony, speech recognition, and video conferencing.
XH8236

$28

PLANTRONICS

Audio 60 Headset

Full-range stereo sound, quick adjust microphone for perfect placement, superior speech recognition microphone, inline volume and mute controls, compatible with most popular sound cards, 2.9 metre cable.
XH6786

$59.98

PLANTRONICS

Audio 90 Headset

Full-range stereo sound with maximum bass, superior speech recognition microphone, quick adjust microphone for perfect placement, inline volume and mute controls, compatible with most popular sound cards, 2.9 metre cable.
XH6787

$79.98

DSE

USB Joystick

3 axis, 4 button joystick with X and Y-axis equalizing mechanism, 4-way viewfinder button, central slide throttle and strong suction cups for stability.
XH4274

$37.54

DSE

USB to Bluetooth C2 v2

Will add Bluetooth to notebooks and desktop PC's. Enables file and resource sharing between PC's and other Bluetooth products (Bluetooth cellphones, PDAs...). Provides a range of up to 10 metres.
XH6881

$46

DSE

USB to Bluetooth C1 v2

Will add Bluetooth to notebooks and desktop PC's. Enables file and resource sharing between PC's and other Bluetooth products (Bluetooth cellphones, PDAs...). Provides a range of up to 100 metres.
XH6880

$56

DSE
CDR 52x 700MB 10pk
XM9982
$4.98

DSE
CDR 52x 700MB 50pk
XM9981
$24.98

imation
Printable CDR 52x 700MB 10pk
XM0683
$11.98

imation
ForceField CDR 52x 700MB 30pk
XM0772
$29.98

DSE
CDRW 4x 700MB 10pk
XM9983
$14.98

MITSUBISHI
CDRW 32x 700MB 1pk
XM0705
$2.98

MITSUBISHI
700MB CDRW 5-Pack
XM4316
$9.98

MITSUBISHI
CDRW 4x 80min 10-Pack
XM4324
$19.98

imation
ForceField DVD+R 8x 4.7GB 5pk
XM0774
$14.98

imation
Printable DVD+R 8x 4.7GB 50pk
XM0718
$69.98

MITSUBISHI
DVD+RW 4x 4.7GB 5pk
XM4386
$14.98

imation
ForceField DVD-R 8x 4.7GB 5pk
XM0773
$14.98

imation
Printable DVD-R 8x 4.7GB 10pk
XM0775
$19.98

imation
Printable DVD-R 8x 4.7GB 50pk
XM0776
$69.98

Ability to read	Type of Media					
	CDR	CDRW	DVD-R	DVD-RW	DVD+R	DVD+RW
CDR Drive	yes	yes	no	no	no	no
CDRW Drive	yes	yes	no	no	no	no
DVD-RW Drive	yes	yes	yes	yes	yes	yes
DVD+RW Drive	yes	yes	yes	yes	yes	yes
Dual Format	yes	yes	yes	yes	yes	yes

Ability to write	Type of Media					
	CDR	CDRW	DVD-R	DVD-RW	DVD+R	DVD+RW
CDR Drive	yes	no	no	no	no	no
CDRW Drive	yes	yes	no	no	no	no
DVD-RW Drive	yes	yes	yes	yes	no	no
DVD+RW Drive	yes	yes	no	no	yes	yes
Dual Format	yes	yes	yes	yes	yes	yes

CDR Speed	1x	2x	4x	8x	16x	32x	48x	52x
Approx Minutes	80	40	20	10	5	2.5 - 3.5	2 - 3	2 - 3

DICK SMITH ELECTRONICS That's where you go!

MITSUBISHI
Audio CDR 80min 10-Pack
Phono-R series of CD-Rs with a cool vinyl look!
Multi speed compatible
C9307

$14.98

MITSUBISHI
8x DVD+R 4.7GB 1 Pack
XM4387

$2.98

imation
DVD+R 16x 4.7GB 1 Pack
XM0736

$2.98

MITSUBISHI
8x DVD+R 5 Pack
5 pack of 8x speed 4.7GB DVD+R's.
CDTR47H5.
XM0706

$9.98

imation
8x DVD+R 5 Pack
XM0639

$9.98

DSE
DVD+R 8x 4.7GB 10pk
10 pack of 8x speed 4.7GB DVD+Rs.
XM9984

$14.98

imation
DVD+R 10 Pack 8x
Pack of 10 4.7GB, 8x speed DVD-R discs in individual slimline cases.
XM0734

$19.98

MITSUBISHI
DVD+R 8x 4.7GB 25pk
XM0707

$39.98

imation
DVD+R 4.7GB 25 Spindle
4.7GB of storage capacity, you can store literally thousands of digital photographs or up to two hours of digital video.
XM4399

$39.98

MITSUBISHI
8x DVD-R 1 Pack
Single 8x speed 4.7GB DVD-R.
CDHR47H1.
XM4383

$2.98

imation
DVD-R 4.7GB 8x
Choose Imation DVD-R to ensure your creative masterpieces won't be altered or erased.
XM0676

$2.98

MITSUBISHI
8x DVD-R 5 Pack
5 pack of 8x speed 4.7GB DVD-R's.
CDHR47H5.
XM0569

$9.98

imation
DVD-R 8x 4.7GB 5pk
DVD-R, a write-once format, is capable of producing pre-mastering discs and is ideal for high volume data recording, archiving and playback.
XM0646

$9.98

DSE
DVD-R 8x 4.7GB 10 Pack
10 pack of 8x speed 4.7GB DVD-Rs.
XM9985

$14.98

imation
DVD-R 8x 10 Pack
Pack of 10 4.7GB, 8x speed DVD-R discs in individual slimline cases.
XM0733

$19.98

MITSUBISHI
8x DVD-R 25 Pack
XM0708

$39.98

imation
DVD-R 8x 4.7GB 25 Pack
Write-once format, is capable of producing pre-mastering discs, ideal for high volume data recording, archiving and playback.
XM0645

$39.98

imation
DVD+ RW 4.7GB 4x
Complete solution for your recording and storage needs. You can store up to 4.7GB worth data and video content for PC and entertainment applications.
XM4307

$3.98

imation
DVD+RW 4.7GB 5 Pack 4x
Complete solution for your recording and storage needs. Store up to 4.7GB worth data and video content for PC and entertainment applications. XM4372

$14.98

DSE
DVD+RW 4x 4.7GB 10 Pack
10 pack of 4x speed 4.7GB DVD+RWs.
XM9986

$24.98

imation
DVD+RW 4.7GB 25 Pack 4x
Handy 25-disc spindle of Imation DVD+RW discs. Ideal for use in DVD Recorders.
XM4373

$59.98

imation
2x DVD-RW 4.7GB 1 Pack
Ideal for backing up larger projects. You can store a combination of both digital video and digital audio files on the same disc. 4.7GB Capacity.
XM4306

$3

MITSUBISHI
4x DVD-RW 5 Pack
5 pack of 4.7GB 4x speed DVD-RWs.
XM0709

$14.98

imation
2x DVD-RW 5 Pack
Rewritable up to 1,000 times. With this built-in versatility, you can store a combination of both digital video and digital audio files on the same disc.
XM0680

$14.98

DSE
DVD-RW 2x 4.7GB 10pk
10 pack of 2x speed 4.7GB DVD-RWs.
XM9987

$24.98

imation
2x DVD-RW 25 Pack
Rewritable up to 1,000 times. With this built-in versatility, you can store a combination of both digital video and digital audio files on the same disc.
XM0643

$48

Panasonic
DVD-RAM 120Mins LM-AF120LE
4.7Gb DVD RAM disc.
C3969

$9.98

DSE
CD/ DVD Marking Pens 2 Pack
XM7087

$4.98

Staedtler CDR Marker Pens 4 Pack
4 pack of markers specifically for CDR media.
XM5364

$9.98

DSE
Paper CD/ DVD Sleeves 100 Pack
XM0627

$9.98

DSE
CD Sender 10 Pack
The fast and easy way to send a CD or DVD disc in the mail. Handy 10-pack, postage price not included.
XM4396

$9.98

iomega
Zip Disk
Stores 100Mb per Zip Disk.
X6662

$29.98

iomega
250MB Zip Disk
Large 250MB Zip disk from Iomega.
XM4116

$34.98

MITSUBISHI
1.44MB Diskette - Single
Anti mould DSHD diskette, 1.44MB.
X7458

$1.98

MITSUBISHI
1.44MB Diskettes - 10 Pack
Back up all your important files with a 10 pack of high quality Mitsubishi diskettes.
X7457

$8.98

imation
Diskettes
10 pack of IBM formatted 1.44Mb floppies.
XM4109

$7.98

imation
Diskettes
10 pack of IBM formatted 1.44Mb floppies in bright neon colours.
XM4110

$9.98

DSE

Black Ink Cartridge DC21BL
Halve your ink costs!
XM9962
$7.93

DSE

Colour Ink Cartridge DC21CL
Halve your ink costs!
XM9961
$19.93

DSE

Black Ink Cartridge DC3BL
Compatible replacement for Canon BCI3eBK
XM9997
$12.43

DSE

Cyan Ink Cartridge DC3CY
Compatible replacement for Canon BCI3eC
XM9996
$10.43

DSE

Magenta Ink Cartridge DC3MG
Compatible replacement for Canon BCI3eM
XM9995
$10.43

DSE

Yellow Ink Cartridge DC3YL
Compatible replacement for Canon BCI3eY
XM9994
$10.43

DSE

Cartridge DC24BL
Compatible replacement for Canon BCI24BK
XM9999
$7.93

DSE

Colour Ink Cartridge DC24CL
Compatible replacement for Canon BCI24C
XM9998
$17.43

DSE

Black Ink Cartridge DC6BL
Replaces Canon
XM9966
$10.43

DSE

Cyan Ink Cartridge DC6CY
Replaces Canon
XM9965
$10.43

DSE

Magenta Ink Cartridge DC6MG
Replaces Canon
XM9964
$10.43

DSE

Yellow Ink Cartridge DC6YL
Replaces Canon
XM9963
$10.43

DSE

Black Ink Cartridge DE13BL
Compatible replacement for Epson T013
XM9993
$16.48

DSE

Colour Ink Cartridge DE14CL
Compatible replacement for Epson T014
XM9992
$21.98

DSE

Black Ink Cartridge DE26BL
Replaces Epson
XM9958
$27.48

DSE

Colour Ink Cartridge DE27CL
Replaces Epson
XM9957
$22.48

DSE

Black Ink Cartridge DE28BL
Compatible replacement for Epson T028
XM9991
$29.98

DSE

Colour Ink Cartridge DE29CL
Compatible replacement for Epson T029
XM9990
$27.98

DSE

Black Ink Cartridge DE38BL
Compatible replacement for Epson T038
XM9989
$12.48

DSE

Colour Ink Cartridge DE39CL
Compatible replacement for Epson T039
XM9988
$19.98

DSE

Black Ink Cartridge DE46BL
Replaces Epson
XM9980
$13.98

DSE

Cyan Ink Cartridge DE472CY
Replaces Epson
XM9979
$8.48

DSE

Magenta Ink Cartridge DE473MG
Replaces Epson
XM9978
$8.48

DSE

Yellow Ink Cartridge DE474YL
Replaces Epson
XM9977
$8.48

DSE

Black Ink Cartridge DE491BL
Replaces Epson
XM9976
$12.98

DSE

Cyan Ink Cartridge DE492CY
Replaces Epson
XM9975
$12.98

DSE

Magenta Ink Cartridge DE493MG
Replaces Epson
XM9974
$12.98

DSE

Yellow Ink Cartridge DE494YL
Replaces Epson
XM9973
$12.98

DSE

Light Cyan Ink Cartridge DE495LC
Replaces Epson
XM9972
$12.98

DSE

Light Magenta Ink Cartridge DE496LM
Replaces Epson
XM9971
$12.98

DSE

Black Ink Cartridge DE50BL
Replaces Epson
XM9960
$20.48

DSE

Colour Ink Cartridge DE52CL
Replaces Epson
XM9959
$26.48

DSE

Black Ink Cartridge DE561BL
Replaces Epson
XM9970
$8.48

DSE

Cyan Ink Cartridge DE562CY
Replaces Epson
XM9969
$8.48

DSE

Magenta Ink Cartridge DE563MG
Replaces Epson
XM9968
$8.48

DSE

Yellow Ink Cartridge DE564YL
Replaces Epson
XM9967
$8.48

brother
LC47BK Black Ink Cartridge
F9333
$29.98

brother
LC47C Cyan Ink Cartridge
F9334
$19.98

brother
LC47M Magenta Ink Cartridge
F9336
$19.98

brother
LC47Y Yellow Ink Cartridge
F9335
$19.98

brother
LC47HYBK High Yield Black Ink Cartridge
F9337
$44.98

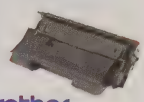
brother
LC800BK Black Ink Cartridge
F9296
$29.98

brother
LC800C Cyan Ink Cartridge
F9297
$19.98

brother
LC800M Magenta Ink Cartridge
F9299
$19.98

brother
LC800Y Yellow Ink Cartridge
F9298
$19.98

brother
TN200 Black Toner Cartridge
F0861
$55.98



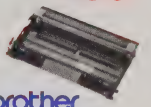
brother
TN1700 Black Toner Cartridge
XM7092
$448

brother
LC21BK Black Ink Cartridge
F9078
$39.98

brother
LC21C Cyan Ink Cartridge
F9079
$29.98

brother
LC21M Magenta Ink Cartridge
F9080
$29.98

brother
LC21Y Yellow Ink Cartridge
F9081
$29.98



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TN2025 Black Toner Cartridge
2,500 A4 pages at 5% coverage per page.
XM2025
$83.98

brother
TN6600 Black Toner Cartridge
6,000 A4 pages at 5% coverage per page.
F9844
$147

brother
LC02BK Black Ink Cartridge
F9956
$29.98

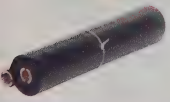
brother
LC02C Cyan Ink Cartridge
F9957
$19.98

brother
LC02M Magenta Ink Cartridge
F9958
$19.98

brother
LC02Y Yellow Ink Cartridge
F9959
$19.98

brother
TN7600 Black Toner Cartridge
6,500 A4 pages at 5% coverage per page
F9899
$148

brother
TN8000 Black Toner Cartridge
2,200 A4 pages at 5% coverage per page.
F9075
$55.98



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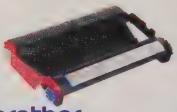
PC101 Printing Cartridge
Ribbon, frame and gears.
F0818
$89.98

brother
PC201 Printing Cartridge
A single, pre-loaded, thermal printing ribbon, frame and gears.
F9187
$49.98



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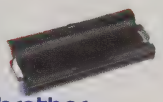
PC301 Printing Cartridge
Ribbon, frame and gears.
F9933
$39.98

brother
PC401 Printing Cartridge
Ribbon, frame and gears.
F9111
$39.98



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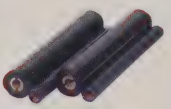
PC501 Printing Cartridge
Ribbon, frame and gears.
F0568
$39.98

brother
PC91 Printing Cartridge
Ribbon, frame and gears.
F0804
$59.98

brother
PC102RF Refill Roll 2pk
Requires PC101 frame and gears.
F9989
$148

brother
PC202RF Refill Roll 2pk
Requires PC201 frame and gears.
F9188
$89.98



brother
PC302RF Refill Roll 2pk
Requires PC301 frame and gears.
F9932
$59.98

brother
PC402RF Refill Roll 2pk
Requires PC401 PC501 frame and gears
F0530
$49.98

brother
ThermaPlus Fax Paper 30m 2pk
High quality anti-curl fax paper rolls for Brother thermal fax machines.
F0937
$29.98

brother
PC95 Thermal Transfer Print Kit
Requires PC91 frame and gears.
F0566
$198

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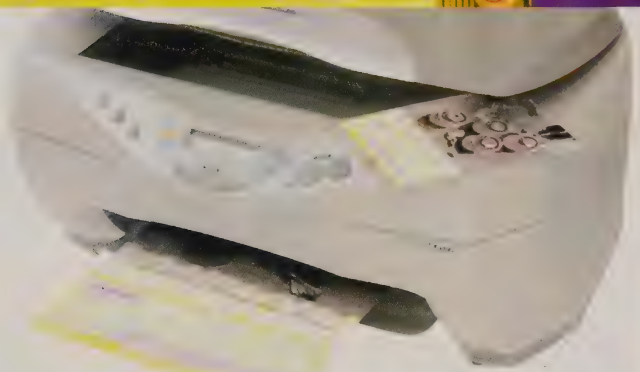
Canon

Printers

To Suit	Colour & Type	Suppliers Code	Cat No
BJ-200, BJ-230	Black cartridge	BC-02	X 5586
BJC-210, BJC 240	Black cartridge	BC-02	X 5586
	Colour cartridge	BC-05	X 2193
BJC-210SP, BJC-255SP, BJC-265SP,	Black cartridge (high yield)	BC-03	XH2008
BJC-1000SP	Colour cartridge	BC-05	X 2193
i70, 180	Black ink tank	BCI-15K	XM0536
	Colour ink tank	BCI-15C	XM0537
BJC-2000 series, BJC-4200, BJC-4200SP,	Black cartridge	BC-20	X 5489
BJC-4300, BJC-4310SP, BJC-4550, BJC-4650,	Colour printhead	BC-21e	X 5852
BJC-4000, BJC-4100, BJC-5500, S100SP	Black ink tank	BCI-21BK	X 5707
	Colour ink tank	BCI-21C	X 5708
BJC-5000, BJC-5100	Coloru printhead	BC-21e	X 5852
	Black ink tank	BCI-21BK	X 5707
	Colour ink tank	BCI-21C	X 5708
S300 series, S200SP, S200SPX,	Black ink tank	BCI-24BK	XM0410
i250, i320, i350, i450, i455, i470D, i475D,	Colour ink tank	BCI-24C	XM0411
iP1000, iP1500, iP2000			
BJC-3000, S400, S400SP, S500 series	Black ink tank	BCI-3eBK	XM0166
S600, S750, S6300, i550, i850, i6100, i6500	Cyan ink tank	BCI-3eC	XM0168
BJC-6000, BJC-6200, BJC-6500, S450,	Magenta ink tank	BCI-3eM	XM0167
S4500	Yellow ink tank	BCI-3eY	XM0169
i560, iP3000	Black ink tank	BCI-3eBK	XM0166
	Cyan ink tank	BCI-6eC	XM0193
	Magenta ink tank	BCI-6eM	XM0194
	Yellow ink tank	BCI-6eY	XM0195
i865, iP4000, iP4000R, iP5000	Black ink tank	BCI-3eBK	XM0166
	Black ink tank	BCI-6BK	XM0192
	Cyan ink tank	BCI-6eC	XM0193
	Magenta ink tank	BCI-6eM	XM0194
	Yellow ink tank	BCI-6eY	XM0195
S800, S820, S820D, S830D, S900, S9000,	Black ink tank	BCI-6BK	XM0192
i950, i905D, i965, i9100, i990, i9950	Cyan ink tank	BCI-6eC	XM0193
iP6000, iP8500	Magenta ink tank	BCI-6eM	XM0194
	Yellow ink tank	BCI-6eY	XM0195
	Photo Cyan Ink Tank	BCI-6PC	XM0196
	Photo Magenta Ink Tank	BCI-6PM	XM0197
iP90	Black Ink Tank	BCI-15BK	XM0536
	Colour Ink Tank	BCI-16C	XM0741

Multi-Functions

To Suit	Colour & Type	Suppliers Code	Cat No
MPC-190, MPC-200, MP360, MP370, MP390,	Black ink tank	BCI-24BK	XM0410
MP110, MP130	Colour ink tank	BCI-24C	XM0411
MPC-100, MPC-400, MPC-600F, MP700,	Black ink tank	BCI-3eBK	XM0166
	Cyan ink tank	BCI-3eM	XM0167
	Yellow ink tank	BCI-3eY	XM0169
MP750, MP780	Black ink tank	BCI-3eBK	XM0166
	Black ink tank	BCI-6BK	XM0192
	Cyan ink tank	BCI-6eC	XM0193
	Magenta ink tank	BCI-6eM	XM0194
	Yellow ink tank	BCI-6eY	XM0195
MPC-20, MPC-30, MPC-70, MPC-75	Black cartridge	BC-20	X 5489
	Colour printhead	BC-21e	X 5852
	Black ink tank	BCI-21BK	X 5707
	Colour ink tank	BCI-21C	X 5708



EPSON

Printers

To Suit	Colour & Type	Suppliers Code	Cat No
Stylus 480, 580, C20UX, C40UX.SX	Black	T013	XM0130
	Colour	T014	XM0131
Stylus Photo 810, 830, 830U, 925, 935	Black	T026	XM0392
	Colour	T027	XM0393
Stylus C60, 61	Black	T028	XM0402
	Colour	T029	XM0403
Stylus C41UX/SX, C45	Black	T038	XM0485
	Colour	T039	XM0403
Stylus R210, R310	Black	T0491	XM7069
	Cyan	T0492	XM7070
	Magenta	T0493	XM0577
	Yellow	T0494	XM7072
	Light Cyan	T0495	XM7073
	Light Magenta	T0496	XM7074
Stylus 400, 440, 460, 600, 640, 670; Stylus Photo 700, 1200	Black	T050	XM7057
Stylus 740, 760, 800, 850, 860, 1520	Black	T051	XM7058
Stylus 440, 460, 600, 640, 670, 740, 760, 800, 850, 860	Colour	T052	XM7056
Stylus C63, 65, 83	Black	T0461	XM0559
	Cyan	T0472	XM0560
	Magenta	T0473	XM0561
	Yellow	T0474	XM7064

Multi-Functions

To Suit	Colour & Type	Suppliers Code	Cat No
Stylus CX3100	Black	T028	XM0402
	Colour	T029	XM0403
Stylus CX5100, CX5300	Black	T0321	XM0451
	Cyan	T0422	XM0509
	Magenta	T0423	XM0510
	Yellow	T0424	XM0511
Stylus RX510	Black	T0491	XM7069
	Cyan	T0492	XM7070
	Magenta	T0493	XM7071
	Yellow	T0494	XM7072
	Light Cyan	T0495	XM7073
	Light Magent	T0496	XM7074
Stylus CX6500	Black	T0461	XM0559
	Cyan	T0472	XM0560
	Magenta	T0473	XM0561
	Yellow	T0474	XM0562
Stylus RX430	Black	T0561	XM1500
	Cyan	T0562	XM1502
	Magenta	T0563	XM1503
	Yellow	T0564	XM1504

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HP Deskjet Printers

To Suit	Colour & Type	Suppliers Code	Cat No
Deskjet 610c, 630c, 640c, 656c	Black	C6614D (HP 20)	XM0064
	Colour	51649A (HP 49)	X6566
Deskjet 600, 660c, 670c, 690c, 692c, 694c, 695c	Black	51629A (HP 29)	X6532
	Colour	51649A (HP 49)	X6566
Deskjet 710c, 720c, 830c, 880c, 890c, 895cxi	Black	51645A (HP 45)	X6565
1120c, 1125c	Colour	C1823D (HP 23)	XM0027
Deskjet 810c	Black	C6615D (HP 15)	XM0061
	Colour	C1823D (HP 23)	XM0027
Deskjet 920c, 948c, 3820	Black	C6615D (HP 15)	XM0061
	Colour	C6578A/D (HP 78)	XM0084
Deskjet 930c, 950c, 960c, 970cxi, 990cci,	Black	51645A (HP 45)	X6565
1180c, 1220c, 6122, 9300	Colour	C6578A/D (HP 78)	XM0084
Deskjet 3320, 3325, 3420, 3535, 3550, 3744, 3745	Black	C8727AA (HP 27)	XM6051
	Colour	C8728AA (HP 28)	XM6052
Deskjet 3650, 3845	Black	C8727AA (HP 27)	XM6051
	Colour	C8728AA (HP 28)	XM6052
	Colour (photo)	C6658AA (HP 58)	XM6055
Deskjet 450cbi, 450ci, 5160, 5650, 5652,	Black	C6656AA (HP 56)	XM6053
9600, 9650, 9680	Colour	C6657AA (HP 57)	XM6054
	Colour (photo)	C6658AA (HP 58)	XM6055
Deskjet 5740, 6540, 6840	Black	C8765WA (HP 94)	XM6067
	Colour (Low Yield)	Colour (Low Yield)	XM6068
	Colour (High Yield)	C9363WA (HP 97)	XM6070
	Colour (Photo)	C9369WA (HP 99)	XM6071

HP Photosmart Printers

To Suit	Colour & Type	Suppliers Code	Cat No
30	Colour	C6657AA (HP 57)	XM6054
325, 375	Colour	C9363WA (HP 97)	XM6070
145, 245	Colour	C6657AA (HP 57)	XM6054
P1000, P1100, P1215, P1218	Black	51645A (HP 45)	X6565
	Colour	C6578A/D (HP 78)	XM0084
7150, 7550, 7260, 7450	Black	C6656AA (HP 56)	XM6053
	Colour	C6657AA (HP 57)	XM6054
	Colour (photo)	C6658AA (HP 58)	XM6055
7660, 7760, 7960	Black	C6656AA (HP 56)	XM6053
	Colour	C6657AA (HP 57)	XM6054
	Colour (photo)	C6658AA (HP 58)	XM6055
8150, 8450	Black	C8765WA (HP 94)	XM6067
	Colour	C363WA (HP 97)	XM6070
2610, 2710, 8150, 8450	Black	C8765WA (HP 94)	XM6067
	Colour (Low Yield)	C8766WA (HP 95)	XM6068
	Colour (High Yield)	C9363WA (HP 97)	XM6070
	Colour (Photo)	C9369WA (HP 99)	XM6071

HP Multi-Functions

To Suit	Colour & Type	Suppliers Code	Cat No
Officejet 4110;	Black	C6656AA (HP 56)	XM6053
PSC 1210	Colour (low yield)	C8728AA (HP 28)	XM6052
	Colour (high yield)	C6657AA (HP 57)	XM6054
Officejet 4255;	Black	C6656AA (HP 56)	XM6053
PSC 1315	Colour (low yield)	C8728AA (HP 28)	XM6052
	Colour (high yield)	C6657AA (HP 57)	XM6054
	Colour (phot)	C6658AA (HP 58)	XM6055
Officejet 5110, v40;	Black	C6615D (HP 15)	XM0061
PSC 750, 950	Colour	C6578A/D (HP 78)	XM0084
Officejet 5510	Black	C6656AA (HP 56)	XM6053
	Colour	C6657AA (HP 57)	XM6054
Officejet 6110;	Black	C6656AA (HP 56)	XM6053
PSC 1350, 2110, 2210, 2310, 3410, 2510	Colour	C6657AA (HP 57)	XM6054
	Colour (photo)	C6658AA (HP 58)	XM6055
PSC Officejet 2610, 2710	Black	C8765WA (HP 94)	XM6067
	Colour	C9363WA (HP 97)	XM6070
Officejet G55, G85, G95, K60, K80	Black	51645A (HP 45)	X6565
	Colour	C6578A/D (HP 78)	XM0084
Officejet r45, r65, t45, t65;	Black	51645A (HP 45)	X6565
Officejet Pro 1170c, 1175c	Colour	C1823D (HP 23)	XM0027
PSC 500	Black	C6615D (HP 15)	XM0061
	Colour	C1823D (HP 23)	XM0027
Officejet 7410, PSC 2355	Black	C8765WA (HP 94)	XM6067
	Colour (Low Yield)	C8766WA (HP 95)	XM6068
	Colour (High Yield)	C9363WA (HP 97)	XM6070
	Colour (Photo)	C9369WA (HP 99)	XM6071

DSE

4x6 Photo Paper 170gsm 50pk

Glossy middleweight paper for all inkjet printers. XM7108

$14.98

DSE

A4 Matte Paper 100gsm 100pk

Exclusive presentation paper for all inkjet printers. XM7107

$14.98

DSE

4x6 Photo Paper 260gsm 50pk

Glossy heavyweight paper for all photo printers. XM7103

$19.98

DSE

A4 Photo Paper 170gsm 50pk

Glossy middleweight paper for all inkjet printers. XM7105

$19.98

Canon

4x6 Glossy Photo Paper 100pk

GP4014X6 190gsm XM5436

$29.98

EPSON

A4 Inkjet Paper 100pk

102gsm XM0689

$39.98

4x6 Everyday Paper 100pk

170gsm semigloss. XM5429

$19.98

4x6 Everyday Paper 100pk

165gsm glossy. XM0726

$29.98

Canon

A4 Glossy Photo Paper 20pk

GP401A4 190gsm. XM5426

$19.98

EPSON

4x6 Glossy Photo Paper 20pk

255gsm XM5406

$14.98

A4 Everyday Paper 100pk

170gsm semigloss. XM7022

$29.98

A4 Everyday Paper 20pk

165gsm glossy. XM5367

$19.98

Canon

5x7 Photo Paper Plus 20pk

PP1015X7 270gsm. XM5608

$19.98

EPSON

A4 Glossy Photo Paper 20pk

194gsm XM5246

$29.98

4x6 Premium Plus Photo Paper 20pk

280gsm glossy. XM5366

$19.98

4x6 Premium Paper 25pk

230gsm glossy. XM5416

$19.98

Canon

A4 Photo Paper Plus 20pk

PP101 270gsm. XM5409

$29.98

EPSON

4x6 DURABrite Paper 50pk

200gsm semigloss. XM7067

$24.98

A4 Premium Plus Photo Paper 20pk

280gsm glossy. XM7075

$39.98

A4 Premium Paper 15pk

230gsm glossy. XM5360

$24.98

Canon

4x6 Photo Paper Pro 20pk

PR101B 245gsm. XM5603

$19.98

EPSON

A4 DURABrite Paper 20pk

200gsm semigloss. XM7043

$39.98

57 Series 100-Photo Pack

Ink cartridge and 4x6 photo paper for 100 colour prints. XM0764

$49.98

4x6 Ultima Paper 20pk

270gsm glossy. XM5370

$19.98

Canon

A4 Photo Paper Pro 15pk

PR101A4 245gsm. XM5334

$39.98

EPSON

PictureMate 100 Photo Pack

Six-colour photo cartridge and 10x15 photo paper for 100 glossy prints. XM0615

$54.98

95 Series 100-Photo Pack

Ink cartridge and 4x6 photo paper for 100 colour prints. XM0763

$49.98

A4 Ultima Paper 15pk

270gsm glossy. XM5362

$29.98

Canon

A4 Office Paper 500-sheet Ream

Great value plain paper. XM5400

$5.98

Canon

A4 Office Paper 5-ream Box

2500 sheets XM5400P

$25

Canon

A4 Business Paper 500-sheet Ream

High quality plain paper. XM7001

$7.98

Canon

A4 Business Paper 5-ream Box

2500 sheets XM7001P

$35

DICK SMITH ELECTRONICS That's where you go!

Force Sharp USB Data Suite Cable

For connecting your PC with a Sharp mobile phone. This USB cable comes bundled with easy-to-use software, over 500 ringtones and images - enabling you to easily personalise, transfer, synchronise, compose and edit your mobile phone's personal content!

E3013

$54.98

Force Nokia USB Data Suite Cable

For connecting your PC with a Nokia mobile phone. This USB cable comes bundled with easy-to-use software, over 500 ringtones and images - enabling you to easily personalise, transfer, synchronise, compose and edit your mobile phone's personal content!

E3014

$54.98

Force Sony Ericsson USB Data Suite Cable

For connecting your PC with compatible SonyEricsson mobile phones. Comes bundled with easy-to-use software, over 500 ringtones and images - enabling you to easily personalise, transfer, synchronise, compose and edit your mobile phone's personal content!

E3015 $54.98

Force Motorola USB Data Suite Cable

For connecting your PC with a Motorola mobile phone. This USB cable comes bundled with easy-to-use software, over 500 ringtones and images - enabling you to easily personalise, transfer, synchronise, compose and edit your mobile phone's personal content!

E3016 $54.98

Force USB Infrared Data Suite Adaptor

For connecting your PC with a variety of mobile phones - wirelessly. Easy-to-use software, over 500 ringtones and images - enabling you to easily personalise, transfer, synchronise, compose and edit your mobile phone's personal content!

E3017 $66.98

Force USB Bluetooth Data Suite Adaptor

For connecting your PC with a variety of mobile phone wirelessly. Easy-to-use software, over 500 ringtones a images - enabling you to easily personalise, transfer, synchronise, compose and edit your mobile phone's personal content! E3018 $74

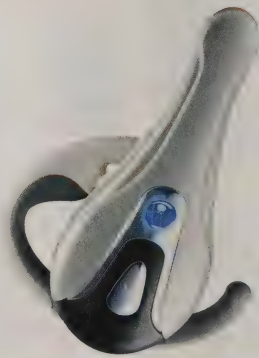
MOTOROLA

Bluetooth Headset HS801

The Motorola HS801 is the perfect companion product for first time Bluetooth headset users as it offers above average features and performance at an attractive price.

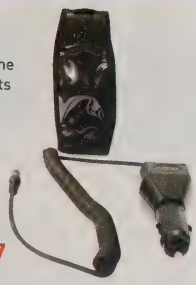
E2864

$98.78



Nokia 1100 Double Combo

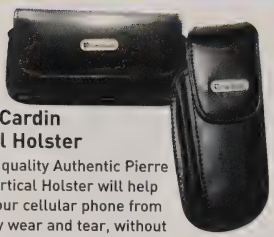
The ideal solution for the mobile phone user. Suits the Nokia 1100 mobile phone. The genuine leather case and travel battery charger is just what you need when you're on the move.
E2703



$38.97

Pierre Cardin Vertical Holster

This high quality Authentic Pierre Cardin Vertical Holster will help protect your cellular phone from day to day wear and tear, without compromising style.
E2902 Small
E2903 Large



$23.98

DSE Mobile Phone Leather Cases

E0314 E1670
E1675 E2625
E2634 E2642
E2699 E2779
E2879 E2880
E2886 E2887
E2888 E2889
E2894 E2896
E2897 E3204
E9057 E9058
E9085 E2634

From $18.97

DSE Mobile Phone Travel Battery Chargers

E0218 E0286
E0293 E0311
E0406 E0458
E1656 E1657
E1658 E2778
E2878 E2949
E3026 E3273
E4084 E4094
E9063 E9074

From $28.97

DSE Mobile Phone Batteries

E0216 E0281 E0283
E0287 E0283 E0294
E0310 E0408 E0431
E0439 E1660 E2029
E2108 E2158 E2224
E2628 E2629 E2691
E2716 E5313 E9067
E9069 E2742

From $48.97

DSE Mobile Phone AC Adapters

E0427 E2164
E2643 E2635
E2881 E2882
E2919 E3027
E3052 E3053
E3277 E3879
E4085 E9455

From $38.97

Universal Car Cradle

An in-car cradle which takes most mobiles.
E3146

$33.97

Blue Ant Safe2Talk Pop Port for Nokia

Powered by your cigarette lighter socket, Safe2Talk can be fitted in seconds, simplicity and safety combined with excellent sound quality make Safe2Talk the perfect in car handsfree solution. E2681

$98.97

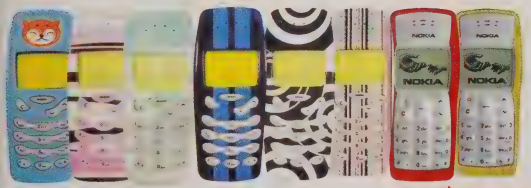
Portable Hands Free suits Nokia Pop Port

Powered by your cigarette lighter socket, this Portable handsfree kit can be fitted in seconds, simplicity and safety combined with excellent sound quality makes the perfect in car handsfree solution.
E2947

$38.97

Mobile Phone Faceplates

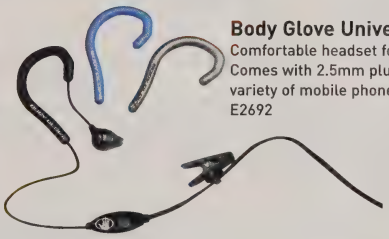
E2418 E2695 E2696 E2697 E2698



From $28.97

Body Glove Universal Headset

Comfortable headset for use on the move. Comes with 2.5mm plug to fit a wide variety of mobile phones
E2692



$48.97

Nokia Original 3220 Wave Faceplate

The Xpress-on Fun Shell for Nokia 3220 is more than just a coloured cover. When you have something to say, you can say it in a big way with wave messaging. Messaging has never been this flashy - or this fun.
E2769

$109.78

Body Glove Cellsuit

Ruggedly made water-resistant and shock-absorbent neoprene case that suits mobile phones up to 89mm H x 50mm W x 25mm D.
E3721 Small
E3722 Large

$28.97

DICK SMITH ELECTRONICS That's where you go!

Double Adaptor
Connects two devices to one socket - like a phone and a fax!
F9002
$9.87

3 Way Outlet
Connects 3 telephone devices to one socket.
F9011
$16.84

Telephone Privacy Adaptor
With 2 extension sockets and 'T' shaped plug nobody can listen in.
F9772
$19.60

Double Adaptor BT Plug
BT Plug to 2 x RJ45 sockets
F9276
$9.87

Double Adaptor
BT plug to 1 x BT socket and 1 x RJ45 socket.
F9258
$9.87

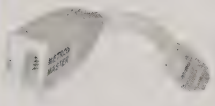
BT Plug to RJ45 Socket Adaptor
F9277
$9.87

RJ45 Plug to BT Socket
F9278
$9.87

US Modular Plug to BT Telecom Socket Adaptor
F9777
$12.80

BT Socket - US Modular (RJ 11)
Connects a BT Telecom plug to a US modular socket.
F9062
$14.80

BT JF45 Adaptor - 150mm
For use with some computer modems.
F9113
$21.80



NZ Master Socket to RJ45 Plug
Convert an RJ45 connection into a New Zealand BT phone Socket.
F2203
$13.96

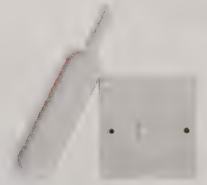
DSE
Modular Double Adaptor
Allows connection of two devices to one modular socket
F2147
$11.76

DSE
3 Way Modular Adaptor
Allows connection of 3 devices to one socket.
F2149
$13.80

DSE
Inline Coupler
A double line socket for joining two modular plugs.
F2146
$11.83

DSE
3 Way Modular Coupler
Ideal for answering machine, phone and fax modem.
F2148
$11.78

DSE
BT / Telecom Plug
4 way line plug, fits standard phone cable
F9001
$5.26



2 Wire Jack Point
For use in homes built since April 1997 and homes converted since then
F9150
$29.60

Wallplate 2 x Two Wire Sockets
F2204
$29.96

Wallplate RJ45 & Two Wire Socket
F2205
$38.66

DSE
DIY Extension Kit
Install your own telephone extensions with this handy kit.
F9121
$39.80

DSE

3 Metre Phone Extension Lead

When you want to place your phone at a distance from the socket.
F9007
$16.86

DSE

5 Metre Phone Extension Lead

Move your phone around the house.
F9008
$18.87

DSE

10 Metre Phone Extension Lead

Fitted with standard phone plug and socket.
F9009
$26.87

DSE

15 metre Phone Extension Lead

Fitted with standard phone plug and socket.
F9010
$29.86

DSE

10m Cord Caddy

BT plug to BT socket to US socket.
F9256
$24.57

DSE

15m Cord Caddy

BT plug to BT socket to US socket.
F9257
$26.64

DSE

Telephone Line Extension Reel - 15 metre

BT 1 Telecom NZ plug and double socket.
F9103
$36.80

DSE

Phone Lead 1.5m

Reverse wiring suitable for modems and faxes etc.
F9006
$12.86

DSE

Phone Extension Lead 1.5m

BT-US reverse adaptor.
F9015
$12.86

Telecom Rental Telephone Lead US NZ 2m

Fits older Telecom models.
F9921
$12.86

DSE

Phone Extension Lead 3m

BT plug to modular standard plug
F9413
$14.66

DSE

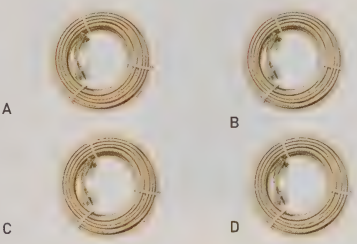
Phone Extension Lead 3m

BT to modular reverse.
F9041
$16.87

DSE

5 Metre Modular to BT Adaptor

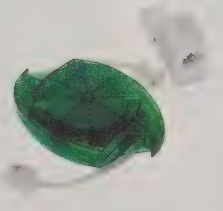
Adapts STP Telecom (BT) type plug to the modular system.
F9102
$19.67



A	F2153	Modular 1.5m Phone Lead	$12.44
B	F2155	Modular Phone Extension Lead - 7 Metre	$14.68
C	F2156	Modular Phone Extension Lead - 12 Metre	$16.88
D	F2157	Modular Phone Extension Lead - 17 Metre	$18.88

Modular Extension Cord RJ12plug-RJ12sk 5M

5 metre cord.
F2152
$24.86

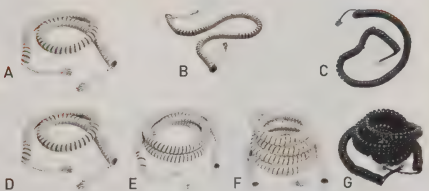


Retractable Modem Lead with Adaptor

F2206
$11.96

Handset Cord Twist Stopper

Plug twist stopper into your phone handset to prevent twisting.
F2185
$9.88



A	F2161	Curly Phone Handset Cables, 3 mtr/ 4p4c, white	$14.70
B	F2162	Curly Phone Handset Cables, 3 mtr/ 4p4c, ivory	$14.70
C	F2163	Curly Phone Handset Cables, 3 mtr/ 4p4c, black	$14.70
D	F2164	Curly Phone Handset Cables, 3 mtr/ 4p4c, beige	$14.70
E	F2165	Curly Phone Handset Cables, 8 mtr/ 4p4c, white	$16.60
F	F2166	Curly Phone Handset Cables, 8 mtr/ 4p4c, beige	$16.60
G	F2167	Curly Phone Handset Cables, 8 mtr/ 4p4c, black	$16.60

Wireless Weather Station WMR928

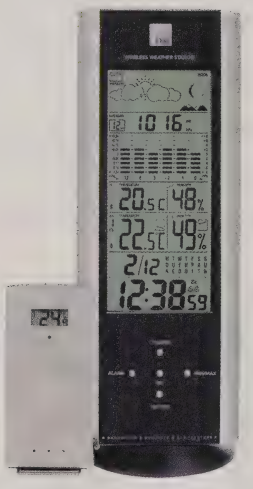
This Wireless Weather Station offers Cable Free operation and comes complete with software to allow download of data to the PC. Features Digital Touch Screen with HiGlo backlight.

Functions includes Wind Meter for reading speed and direction, Remote Rain Gauge with gauge distances of up 100 metres line of sight, Barometer with easy to read forecasting symbols with current barometric pressure reading (hPa) and history bar graph, Min/Max temperature and humidity memory. Also features a Clock with alarm and calendar, measures indoor/outdoor temperature and humidity.

The software allows you to download and store all information that is captured by the remote wireless sensors onto your PC. Includes Adaptor , plus needs 4x"AAA" and 10x"AA" batteries (not included).

Y5195 CUSTOMER ORDER. AVAILABLE LATE 2005.

$698



DSE

Deluxe Weather Station

Wireless Weather Stations will forever change how we read, and make use of the weather. No more running cables out of windows or attaching large, unattractive thermometers to the exterior of your house to know what the weather is like outside.

Wireless technology enables the portable central display unit to receive information such as temperature and humidity from a number of remote sensors located up to 30m (~100 ft.) away. This information is then processed and displayed in a clear, easy-to-understand way.

This DSE Wireless Weather Station consists of a Remote Wireless Sensor along with a Base Station. The Remote Wireless Sensors small, portable design makes it easy to place in a convenient location outside your home. The Base Station receives, processes and buffers the incoming data and displays it on a large, clear LCD.

Q4254

$97.74

Wireless Weather Station WS303A

This Electronic barometric weather has a forecaster with wireless data system for measuring outdoor temperature range between -50C to 70C (optimal range -10C to 60C), the wireless data system has a maximum range of up to 20m and the temperature reading is Celsius/fahrenheit selectable.

The Electronic barometric weather forecasts are for sunny, slightly cloudy, cloudy and rainy. Digital hygrometer range between 5% to 99%. Also features Perpetual calendar with day of week/month to make tracking the weather easy and fun to do. Also includes Snooze alarm clock which can be set to either a 12hr or 24hr clock. 1 x CR2032 battery and 2 x AAA batteries required.

D3971

$78.88

Whether you are a road warrior, serious business user, heading out for a family getaway, or driving around town - Navman GPS products can help you get there on-time.

Efficiency, safety and peace-of-mind; GPS navigation can make your life easier. Navman's In-Car Navigation and Personal Navigation products are unequalled in ease-of-use and functionality. Navman offers the complete GPS navigation solution, to help you find your way quickly. Detailed maps, voice guidance, points of interest and directional information will help you get to your destination safely and on time.

NAVMAN

PIN570 GPS Pocket PC

The Navman PiN (Personal Interactive Navigation) combines the latest GPS technology with elegant design to deliver the ultimate cable-free navigation solution. Navman PiN enables you to accurately navigate to any street or road in New Zealand with full turn by turn voice guidance. This new Version even supports street numbers!!!

Since the Navman PiN is based around Windows Mobile 2003 OS, it is also a fully functional PDA (Personal Digital Assistant) and includes all the standard software available with WM2003 such as Pocket Word and Pocket Excel and supports a huge number of 3rd party software making this an ideal choice for on the go.

D4024

$1047

NAVMAN

iCN635 In-Car GPS

The convenient, powerful and easy-to-use In-Car Navigation solution. Whether driving across country, around town or anything in between, the Navman iCN 635 includes everything needed for a complete street navigation solution. Ultra-sharp screen technology displays maps in 3-dimensional view with unprecedented clarity

D4005

$1698

NAVMAN

Navman iCN520 In-Car GPS

Add top quality Global Positioning System (GPS) capabilities to your vehicle without paying a premium price. The Navman iCN 520 is an easy-to-use, affordable and portable in-Car Navigation (iCN) GPS solution with advanced navigation features and user-friendly interface in a lightweight, portable, contemporary design.

D4106

$997

NAVMAN

Maps for iCN/Pin Series

Navman maps are available in CD format on an ORDER ONLY basis. Please note that you may need purchase an additional memory card for the map to fit in your device. Maps are available for:

- NZ
- Australia
- US and Canada
- UK and Europe

Please call for pricing and availablity.

NAVMAN

iCN635 External Antenna

The GPS External Antenna provides users with enhanced reception where there is poor visibility of the open sky. This is ideal for use in vehicle with athermic (metal sintered) windows where the GPS signal is blocked.

D3854

$99.87

NAVMAN

External Antenna MMCX

This MMCX antenna allows your GPS to be used inside a car with an athermic windscreen. Magnetic base that can be mounted on the outside of the car. Suitable for Navman PiN Pocket PC.

D3855

$99.97

DICK SMITH ELECTRONICS That's where you go!

HANDHELD SCANNERS

72XLT VHF/UHF Scanner

Very affordable 100 channel (ten banks of ten) scanner with great features. Frequency coverage is 25-88,108-174 and 400-512 MHz. It has Uniden's new Close Call RF Capture Technology that instantly tunes to signals from nearby transmitters.

D2764

$198

92XLT VHF/UHF Scanner

The Bearcat UBC-92XLT is an affordable 200 channel scanner with great features. It has Uniden's new Close Call RF Capture Technology that instantly tunes to signals from nearby transmitters.

D2765

$298

IC-R5 Handheld Scanner

The IC-R5 radio scanners combination of small size, powerful specifications and outstanding features put you in the action.

D2805

$598

IC-R10 Handheld Scanner

The IC-R10 is a powerful wide-band receiver capable of receiving in FM, WFM, SSB, CW and AM modes. It's a versatile all mode HAND HELD receiver that has a receiver coverage of 500 kHz - 1.3 GHz allowing it to pick up a wide variety of broadcasts.

D9026

ORDER ONLY

$911

IC-R3 Scanning Receiver

The new video capable IC-R3 gives you an amazing range of information. Along with frequency coverage from 495kHz right up to 2.450GHz, the IC-R3 gives you TV reception on the 2" TFT colour display.

D2804

ORDER ONLY

$1283

IC-R20 Handheld Scanner

Until the IC-R20, the capability of monitoring two frequencies required two radios. Whether you need to monitor local public safety, air traffic control, even the play by play from both the local TV and radio station is possible!

D9056

ORDER ONLY

$1381

DESKTOP SCANNERS

VHF/UHF Scanner UBCT-8

This Desktop scanner with Trunktracker III "Trunking Radio Trace Technology" offers 250 programmable memory channels - 12 bands.

D2766

$398

UH-013 Scanning UHF CB

This radio brings together both an integrated 40-channel UHF CB radio and a 40-channel scanner in the one unit. An ultra-compact design and a remote or in-dash mounting control head compliment this breakthrough in technology.

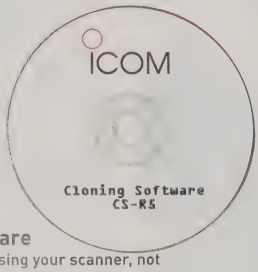
D1763

$448

BP-120 Battery Pack
Suits 120XLT/220XLT/245XLT Uniden handheld scanners.
D9007
$49.78

BP-2500 NiCad Battery Pack
600mAh. Suits Uniden 3000XLT handheld scanner.
D9008
$79.93

Power Supply/Charger MAA956
Mains power supply / charger for a variety of Uniden products.
D9009
$39.77



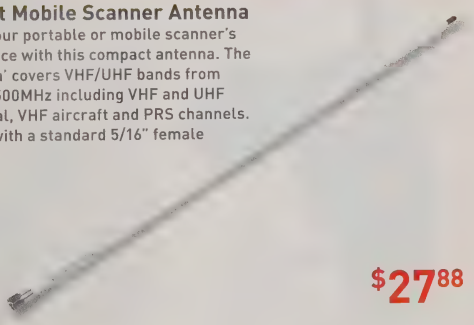
ICOM

Cloning software
Spend your time using your scanner, not programming it.
D9036
$78.88

Serial Cloning Cable for ICOM Handhelds
D9037
$79.88

SCANNER ANTENNAS

Compact Mobile Scanner Antenna
Improve your portable or mobile scanner's performance with this compact antenna. The 'Scantenna' covers VHF/UHF bands from 70MHz to 500MHz including VHF and UHF commercial, VHF aircraft and PRS channels. It's fitted with a standard 5/16" female thread.
D4434



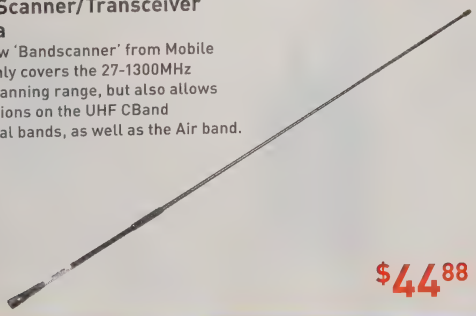
$27.88

MOBILE ONE

"Scanducky" Handheld Scanner Antenna
The "Scanducky is a wideband antenna designed for use with handheld scanners. Approximately 400mm long, and moderately flexible, the Scanducky is fitted with a BNC plug which suits most scanners. Covers 25MHz to 1300MHz.
D4433

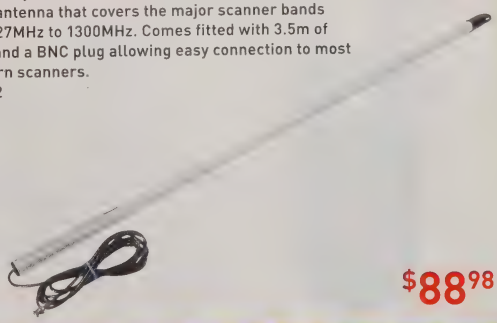
$38.27

Mobile Scanner/Transceiver Antenna
The all new 'Bandscanner' from Mobile One not only covers the 27-1300MHz receive scanning range, but also allows transmissions on the UHF CBand commercial bands, as well as the Air band.
D4437



$44.88

Base/Portable Scanner Antenna
Increase your scanner's coverage with this quality 1.2m antenna that covers the major scanner bands from 27MHz to 1300MHz. Comes fitted with 3.5m of coax and a BNC plug allowing easy connection to most modern scanners.
D4432



$88.98

DSE

Twin Pack UHF PRS Transceivers

Includes two 40ch UHF radios, two earphone/mics, AC adaptor, twin desktop charger & rechargeable batteries. Up to 3km outdoor line of sight operation range.

D1793

$88.87

DSE

0.5W UHF Twin Value Pack

Stylish and compact radio with 2-way communication, up to 3km range (line of site), equipped with roger beep, VOX, call and monitor functions, supports auto channel scan, channel memory, also include a low battery indicator and a selectable power output.

D1846

Due November 2005.

$98.87

Uniden

Twin Pack UHF PRS Transceivers

Ready to talk, ready to go! This 40 Channel PRS radio has an LCD display, over 2km line of sight range, and even better... there's two of them!

D1804

$89.87

Uniden

UH-039P 40 Channel UHF CB 2 Pack

Featuring 0.7 Watt Power and a compact and ergonomic design, this is ideal for families. Good value UHF package.

D1787

$153

Uniden

UH-041P PRS Radio Twin Pack

UH-041 twin pack. 40 channels up to 4km range (line of sight), VOX capability, and much more.

D1776

$228

Uniden

UH-060SX-2 40 Channel UHF Radio 2 Pack

A powerful handheld communicator with D+Booster (Extreme Distance Booster) technology delivering superior range and battery efficiencies compared to standard UHF Systems.

D1721

$298

Uniden

PRS Transceiver UH-075XR

Voice activation capabilities, splashproofing and up to a 12km line of sight range make the Uniden UH-075 great value for money!

D1779

$377

GME Electrophone

2W PRS Transceiver TX630

The TX630 comes complete with a Leather Carry Case, desktop charger and a 1000 mAh Li-ion Rechargeable Battery Pack with enough power for a full days work.

D9057

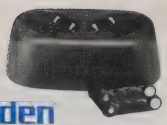
$217

Uniden

NiCad Charger for UH-044

For use with the Uniden UH-040XR and UH-042XR handheld transceivers. plugs into the transceiver, providing an overnight charge cycle. D1832

$29.87



Uniden

Charge Pack for UH041/041P

Supplied with 2x4.8V 700MaH NiMH spare batteries, 1 plug pack and i dual charging cradle. D1774

$69.93

Standard Nicad Battery to suit UH-054 or HH940

A replacement NiCad battery pack to suit the Uniden UH-054 handheld UHF CB. Rated at 4.8V 450m A/H. D1827

$68.47

Uniden

DT040S Desktop Charger

Desktop charger to suit Uniden UH-040/UH-042/UH-044 UHF radios.

D1774

$78.98

PRS High Capacity UH-053 Battery Pack

A long life 850mA/H version for the UH-053 handheld PRS. Enabling 40% more operating time. Uses existing AC plugpack charger supplied with the UH-053. D1825

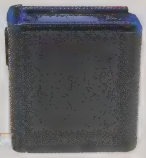
$74.58

Uniden

850mA/H Nicd for UH-054

A replacement NiCad battery pack to suit the Uniden UH-054 handheld UHF CB or HH940 VHF Marine. Rated at 4.8V 850mA. D1826

$124



Uniden

700mAH NiCd, UH-056/57

Ni-Cad 700mAh battery replaces the standard battery packs supplied with the Uniden UH-056 and UH-057

D1815

$138

Uniden

VOX Headset for UH041/041P

A lightweight headset & microphone for the Uniden UH041 and UH041P.

D2046

$29.93

digitor

Earpiece/Microphone for UH044

Lightweight clip on microphone and earpiece with PTT switch. Suits Uniden UH040/042/ 050/052.

D2044

$38.47

DSE

Speaker/Microphone for UH044

Suits the Uniden UH-040/42 and UH-050/52 series handheld transceivers.

D2042

$48.67

Uniden

VOX Headset for UH-075

VOX earphone/microphone with PTT switch. Suits UH-075 handheld CB radios.

D2049

$49.96

Uniden

Speaker Microphone for UH-075

D2050

$69.93

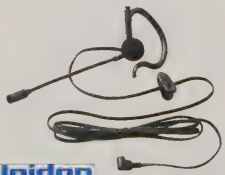
Uniden

HM-040 Earphone/ Microphone

A lightweight earphone/mic that can be used with the Uniden UH-040/042XR and UH-050/052XR series handheld UHF CB transceivers.

D2018

$68



Uniden

SM060 Speaker Microphone for UH-060

D2036

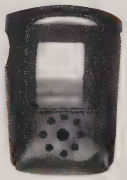
$69.97

Uniden

Carry Case for UH041/ 041P

D2048

$21.93



Uniden

Carry Case for UH-075

D2051

$21.93

Carry case for Uniden UH-040XR, UH-042XR

Stylish carry case for your Uniden UH-040XR or UH-042XR.

D2041

$22

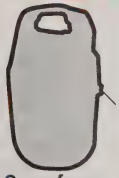
LC-060 Carry case for UH060/SX

D2017

$24.96

NEW!

Pictures not available at time of printing.



Uniden

Waterproof Case for UH041/041P

Keep your Uniden PRS dry and protected with this waterproof case.

D2052

$49.88

Uniden

DC Power Lead for UH-054

Power lead for the Uniden UH-054 and HH940 transceivers.

D1828

$34.97

TRANSCEIVERS

Uniden

UH-012 Mobile PRS Transceiver

A compact mobile PRS radio with programmable One-touch channel recall, repeater access, and Open Scan capability. Includes mobile mounting bracket, microphone and power lead.

D1764

$298.97

Uniden

UHF CB Radio UH-088SX

The UH088sx is a great Mobile UHF Unit with 40 Channels, a Front Fire Speaker for better sound clarity and a Programmable Scan Function allowing you to scan the 40 channels with both open and group scan functions.

D1835

ORDER ONLY

$327

GME Electrophone

TX3200 UHF Transceiver 5W

The TX3200 is ideally suited to the harsh environment of earth moving equipment, tractors and 4 wheel drives, yet its compact size and futuristic styling will complement any family sedan, station wagon or utility vehicle.

D9061

$338

Uniden

UH-013 Scanning UHF CB

This radio brings together both an integrated 40-channel UHF CB radio and a 40-channel scanner in the one unit. An ultra-compact design and a remote or in-dash mounting control head compliment this breakthrough in technology.

D1763

ORDER ONLY

$448

1/4 Wave Mobile PRS Antenna

An ultra-flexible 1/4 wave PRS antenna made from tough stainless steel wire in a protective plastic sheath. Install it on any standard 5/16" UHF antenna base.

D4008

$14.82

PRS 4db Antenna Pack

Stainless-steel 4dB antenna with a UHF antenna base and lead. Durable and easy to install. Includes 3.6m of high-quality Mil-Spec Coax, fitted with a PL-259 plug and comes with instructions.

D4000

$44

4db Fibreglass PRS Antenna

5/8 over 1/4 wave colinear antenna uses copper braid over a fibreglass rod – outstanding performance from 60cm of antenna. Fits any standard 5/16" UHF antenna base.

D4013

$28.78

1/2 Wave PRS Antenna

A compact, unity-gain antenna that stands only 36cm high. Ideal for vehicles and boats with fibreglass roofs.

D4020

$44

4.5db Stainless-Steel Whip PRS Antenna

A state-of-the-art stainless-steel whip antenna with a low angle-pattern and at least 4.5dB gain.

D4006

$28.77

5db Rugged Elevated Feed PRS Antenna

Thick rugged antenna uses a 3.2mm diameter stainless-steel whip which will remain vertical at high vehicle speeds for optimum performance.

D4028

$88

6db Gain "Mega Blaster" PRS Antenna

Mount it on your vehicle roof with a standard UHF base (D-4516) for best results. Can also be used as a scanning receiver antenna.

D4007

$74

6db Gain Base PRS Antenna

High-gain (6dB), 2.4m high, omni-directional base-station antenna. The high quality fibreglass radome and aluminium tubing construction will ensure a long life.

D4011

$98

Light-Duty Base

Standard 5/16" 26 TPI threaded mount with black polypropylene plastic base. Suits loaded 1/4 wave and smaller CB antennas or small VHF whips. Mounting plate includes solder lugs for coax connection.

D4056 $13.68

VHF/UHF Base

Waterproof design made especially for low loss VHF/UHF use. Cable enters through the bottom of the mount and terminates on the antenna thread.

D4056 $13.66

SO-239 Antenna Base

A waterproof coaxial SO-239 type base for use with PL-259 antennas. It's the ideal base when you often need to remove the antenna.

D4035 $19.63

Heavy-Duty Base

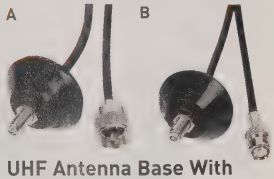
Standard 5/16" thread uses a stainless-steel rod and metal base plate for greater strength and reliability.

D4313 $28.63

Antenna Base With Lead

Standard 5/16" threaded base with 3m of quality coax and PL-259 plug attached. Mount it directly, or use it with our gutter mount, 'Z' brackets, boot mount, or mirror/roof-rack mount.

L2105 $24.63



UHF Antenna Base With Lead

A D4050 PL259 Plug Version
B D4050 BNC Plug Version

$26.24

Dipole Base and Lead Kit

Moulded 5/16" base with 3.6m coaxial lead and PL-259 plug. Fits onto gutter, boot or mirror mount. Patented.

D4022 $29.93

Universal Mount Magnetic Base

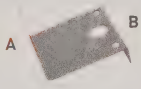
Don't like to drill a hole in your new car? This quality magnetic mount can be used with compact antennas (150g max.) and comes with a Mylar anti-scratch surface, 3.6 metres of coax, and fitted PL-259 plug. Standard 5/16" thread.

D4514 $57.77

Heavy Duty Magnetic Antenna Mount

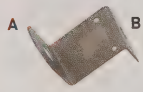
Chrome magnetic base with black plastic mount incorporating a brass 5/16" thread.

D4513 $64.93



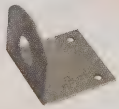
"Z" Type Mounting Bracket

A D5152 Black Zinc $10.77
B D5153 Stainless Steel $13.44



Angled "Z" Mounting Bracket

A D5155 R/Hand Rear
B D5156 L/Hand Rear $13.44



"L" Style Mounting Bracket

A stainless-steel "L" shaped bracket for mounting an antenna base on the inside of the vehicle's boot or bonnet lip. It comes with two stainless-steel self-tapping screws.

D5160 $10.28

Bull-Bar Antenna Mount

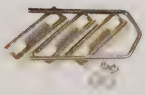
Designed for mounting small to medium antennas on a 4WD bull-bar. Uses a rugged black zinc-coated mounting plate with stainless-steel U-bolts and hardware for a long life.

D5165 $26.73

Boot/Bonnet Mount

Stainless-steel boot or bonnet mount. It grips the top edge of the boot lid with non-scratch bumpers. Stainless-steel screws secure it to the underside of the boot lid. Suits all but the biggest antennas.

D4515 $26.73



Parallel Antenna Mounting Bracket

Rugged mounting bracket assembly that allows a vertical antenna, with an aluminium tubing base, to be mounted onto a pole. Typical antennas will require two of these per installation.

D5170 $13.53

Mirror/Roof Rack Mount - Stainless Steel

Allows most standard CB antennas to be mounted on a truck style side-mirror or car roof-rack.

D4519 $22.88

Compact Stainless Steel CB Antenna Spring

A lightweight spring which reduces the damage caused to standard helical whips from common everyday hazards such as low carpark roofs and overhanging trees.

D4500 $25.77

Medium Stainless Steel CB Antenna Spring

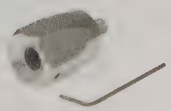
Suitable for medium to large antennas with a standard 5/16" thread fitting. Stainless steel construction ensures a long life.

D4509 $32.48

CB DC Power Leads

DC power leads, with in-line fuse holder, to suit a variety of old and new CBs. 3 Pin Suits early Midland and late Uniden CBs.

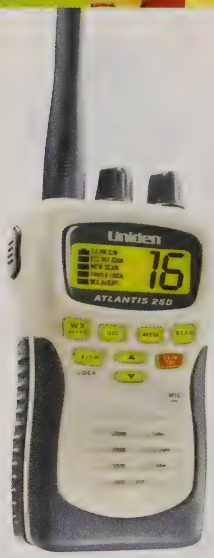
D9001 $11.93



Antenna Adaptor 1/2"-5/16" thread

Adapts 1/2" female to 5/16" male thread.

D4518 $9.91



Atlantis 250 VHF Marine Radio

Durable, reliable, made for any marine activity

D9039

$248

Cobra Marine VHF Transceiver MRHH300

Dual watch submersible meets JIS7 standards. Large LCD display.

D1696

$228

Uniden Voyager Handheld VHF Marine Radio

Uniden's Voyager hand held VHF radio packs an impressive array of features in one of the smallest radios ever seen. So small it will fit conveniently in a pocket, ready to grab at a moments notice.

D9011

$398

Cobra Marine VHF Transceiver MRF55

Full featured 1W/25W VHF marine radio. Dual watch and scan, DSC and more.

D1697

$297

Ground Independent VHF Marine Antenna

Factory tuned for best performance on fibreglass and wooden boats. Provided with a sturdy swivel deck mount, 3.6m cable and plug.

D4014

$84.72

VHF Marine Antenna

1.8m halfwave Marine VHF antenna suitable for the Uniden MC535 or MC1020 marine VHF radios. Has 3dB gain and a fold down mount for when not in use.

D4084

$98.72

FISH FINDERS - Order Only

NEW TO 2005

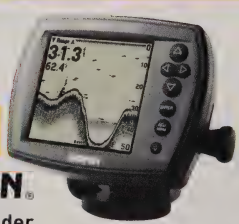
GARMIN

FF120 Fishfinder

The Fishfinder 120 has one of the largest and highest-resolution displays of any fishfinder in its class, providing better separation and contrast for the recreational angler.

D3526

$327



NEW TO 2005

GARMIN

FF250 Fishfinder

The Garmin Fishfinder 250's high-performance sonar and high-resolution screens make fishing easy. Its single or dual-frequency sonar is dependable and intuitive to use.

D3527

$667

NEW TO 2005

GARMIN

FF250C Fishfinder

"With the Fishfinder 250C, Garmin has delivered the highest quality colour sonar product at an amazingly affordable price," according to Hank Parker, professional fishing legend.

D3528

$1247

Uniden

Mobile AM CB Radio PRO530XL

The PRO530XL is a great 26MHz Mobile AM Unit with 40 Channels, Dual Watch Function allowing you to monitor the road channel and other channels every 2 seconds and a ANL function which reduces unwanted noise for better reception.
D1836

$124

GME 40 Channel Mobile 26MHz CB

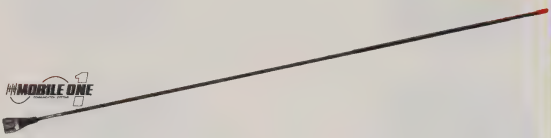
Full 40 AM channel coverage with an interference suppression circuit for improved reception, adjustable RF gain control, instant channel 15 switch and LED signal strength indicator.
D1436

$287

26MHz 60" (1.5m) Antenna

Mobile One's unique spiroid wind produces an antenna that maximises signal, exhibits a balanced field distribution and uniform radiation pattern. The radiator is coated with tough wearing heatshrink tubing for total weather protection. Model DX160CDN.
Connector type 5/16".
D4060

$27.33



26MHz 36" (91cm) Antenna

These special whips are manufactured incorporating the latest computer technology in helix design and are wound on an extra flexible fibre-glass former. All Flexiwhips are designed to withstand even the harsh extremes of the New Zealand environment and are coated with tough wearing heatshrink tubing for total weather protection.
Model DX136FWN. Connector type 5/16". D4060

$27.38

Mobile One Communication Systems - 26 MHz 12" Rubber Duck CB Antenna

The extra Low Profile allows the vehicle to go anywhere without the height restrictions of other large antennae. Its precision tuned coil is constructed of enamel coated wire wound on an indestructible former.
D4063

$29.44

26MHz 36" Antenna, Base, Lead and Connector

This pack contains a 36 inch helical whip antenna, 1/2 wavelength (3.6m) of RG58 coaxial cable, 1 x PL-259 connector and an antenna base, a mount all predetermined and tested.
D4064

$29.93

61MHz 26MHz Whip Antenna

This continuously loading helical whip is wound onto a rugged fibreglass former with a constant turn winding and exhibits a radiation pattern similar to a full sized 1/4 wave whip for greater range.
D4151

$44.93

26MHz Heavy Duty 60" (1.52m) Antenna, Base & Lead Pack

The Mobile One Superhelical antenna kit is a complete antenna system suitable for the New Zealand 26 MHz Citizens Band. When mated with a stainless steel spring and a heavy duty antenna base, the antenna will provide excellent performance. Model DX16050BPN.
D4068

$89.93

digitor

CB Extension Speaker

A compact 8-ohm extension speaker ideal for use with most CBs and scanning receivers. Uses a highly-sensitive 57mm plastic-cone 5W speaker for clear audio and comes with mounting bracket, screws and a 1.5m lead fitted with 3.5mm plug. D2250

$25.43

Uniden

MS-100 CB Extension Speaker

A slimline 5W extension speaker for use where only a small mounting space is available. Comes with flush mounting bracket and lead fitted with a 3.5mm plug to suit most CBs and scanners. Size is: 73(W) x 66(H) x 37(D)mm.
D2275

$32.48

DICK SMITH ELECTRONICS That's where you go!

GARMIN

Garmin eTrex GPS Receiver

User friendly, palm-sized, waterproof GPS with graphical waypoint icons. 12 parallel channels with storage for up to 500 waypoints.

D3898

$248

NEW TO 2005

GARMIN

GPS60 GPS Receiver

The rugged, waterproof GPS60 is the perfect, low-cost, navigator for wherever your spirit of adventure takes you. Features a marine point database, a dedicated geocaching mode, sunrise/sunset and moon phase tables, optimal hunting and fishing times - plus much more

D3529

$448

GARMIN

eTrex Camo GPS Receiver

Anglers and hunters will love the Camo's built-in database of the best times to go fishing and hunting in any location. The Camo comes with all the features of the eTrex and is housed inside a camouflaged case that's designed not to give away your position.

D3476

ORDER ONLY

$396

GARMIN

eTrex Venture GPS Receiver

The eTrex Venture offers several advantages to the user, the LCD screen resolution in enhanced to 160x288 pixels and includes a basic worldwide point database of major cities.

D3477

ORDER ONLY

$538

GARMIN

eTrex Legend GPS Receiver

The ideal travelling companion with a built-in base map of Australia and New Zealand. The base map features major towns, roads, rivers and lakes.

D3478

ORDER ONLY

$447

GARMIN

eTrex Vista GPS Receiver

The top of the range eTrex Vista is, simply, packed with features. These include a fluxgate compass with Sight 'n' Go feature, a barometric altimeter with Elevation computer, best hunting and fishing times and celestial tables.

D3479

ORDER ONLY

$876

GARMIN

GPS Receiver GPS72

This rugged, waterproof, unsinkable GPS receiver offers large 4-level grayscale screen. 1MB internal memory and 500 user waypoints.

D3482

$497

GARMIN

GPS Receiver GPS76

Waterproof GPS with 1MB internal data storage and extra large screen for easy use. Quad helix antenna for superior reception.

D3483

ORDER ONLY

$611

NEW TO 2005

GARMIN

GPSMAP 76S GPS Receiver

If you're a devoted mariner or serious outdoor enthusiast, the new GPSMAP 76S is the GPS/mapping unit for you. The "S" in the name stands for "sensors", because the GPSMAP 76S incorporates a GPS receiver, barometric altimeter, and an electronic compass.

D9003

ORDER ONLY

$1118

NEW TO 2005

GARMIN

GPSMAP76CS Handheld GPS

All other marine handheld GPS units pale when compared to the GPSMAP 76C.

D3521

ORDER ONLY

$1331

GARMIN

eTrex Summit GPS Receiver

Smallest handheld package available, incorporating a powerful 12 channel receiver, electronic compass and barometric sensor and Altimeter, waterproof mobile unit

D3881

ORDER ONLY

$667

GARMIN

GPSMAP 76 GPS Receiver

Rugged, waterproof and unsinkable. Comes with New Zealand and Australian cities, main highways and rivers on its 8MB memory.

D9002

ORDER ONLY

$847

GARMIN

Garmin GPS128 GPS Receiver

Featuring a large, high-contrast, 4.25" LCD display and Garmin's popular 12 parallel channel receiver, the GPS 128 gives navigators more than just a handheld without the bulkiness and high cost of most fixed-mount units.

D3484 ORDER ONLY

$788

GARMIN

Geko 101 GPS Receiver

Features high contrast display, automatic track storage. Waterproof: submersible for 30 minutes in one metre of water. Easy operation: five buttons for one-hand use. Waypoint/Route storage: 250/0.

D9018

$334

Garmin Geko 201 GPS Receiver D9019

ORDER ONLY

$397

NEW TO 2005

GARMIN

GPS Receiver GPSMAP60CS

Packed with exciting new features and delivering the kind of colour that consumers want in their handheld GPSs. Lightweight, rugged, waterproof unit that offers a 256-colour display.

D9053

ORDER ONLY

$1246

GARMIN

Forerunner 201 GPS

The Forerunner 201 offers athletes an easy-to-read display, ergonomic wristband, and integrated GPS sensor that provides precise speed, distance, and pace data.

D9040

ORDER ONLY

$381

GARMIN

Marine Mount for Geko

Adjustable marine mount swivels and tilts for optimum viewing and has a locking mechanism to keep unit secure. Accepts optional external power adapter.

D9046

$72

GARMIN

Bike Mount for Geko

Snap your GPS unit into this secure handlebar mount and it's ready to ride. Mount fits up to a one-inch diameter bar and is perfect for your bike, motorcycle or ATV. D9047

$41

GARMIN

Bluechart Data Card

Includes the entire coast of the North Island, including the Three Kings Islands; also includes the northernmost part of the South Island.

D9062

$378

GARMIN

Data Cable for eTrex

Hard wire your GPS directly to another electronic device. Allows you to send speed and position data to devices such as a chartplotter, computer, auto pilot, radar, etc.

D9081

$42

GARMIN

Marine Mount for GPS76

This adjustable marine mount swivels and tilts for optimum viewing and has a locking mechanism to keep unit secure.

D3486

$99.24

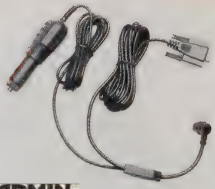
GARMIN

Car Mount GPS76

This adjustable automotive mounting bracket also accepts optional external power adapter for quick connection to a DC power supply.

D3487

$136



GARMIN

Data Lead LE45CI

This cable allows you to make a powerful connection between your Garmin 12XL and your PC. Create routes and waypoints on your PC and transfer them to your GPS.

D3488

$111

GARMIN

Data Lead/Cigarette Adaptor LE28

This cable allows you to make a powerful connection between your GPS and your PC. Suits eMap and eTrex.

D3489

$116

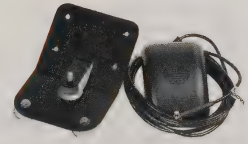
GARMIN

Remote GPS Antenna

A low profile external antenna with 3.0 metres cable, MCX connector. To suit most Garmin GPS Products.

D3879

$76



GARMIN

Magnetic/Suction GPS Antenna

This improved remote antenna runs on a lower voltage so battery drain is reduced. Comes with 2 mounting options.

D3880

$178

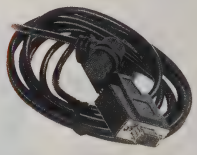
GARMIN

Marine GPS Antenna

If you're mounting your GPS unit below deck, you'll need this remote marine antenna to receive GPS signals. Comes with 30 feet of cable and BNC connector.

D3882

$234



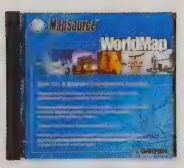
GARMIN

PC-GPS Interface Cable

This data cable has bare wires at the end so you can hard wire your GPS directly to another electronic device.

D3883

$99.57



GARMIN

GPS Map Source Software

Provides world map featuring political boundaries, coastal outlines, rivers, lakes, towns, islands and nautical navigation aids.

D3884

$294

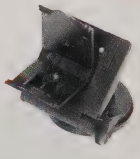
GARMIN

Bike Mounting Bracket for eTrex

Mounts easily to any handlebar up to one inch (25mm) in diameter. For use with Garmin eTrex.

D3887

$51.42



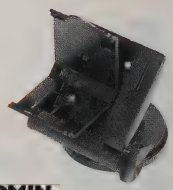
GARMIN

Car Mounting Bracket for 2Plus

Car mounting bracket to suit a 2 Plus GPS System.

D3888

$88



GARMIN

Swivel Mounting Bracket

Swivel mounting bracket to suit a 2 Plus GPS System.

D3889

$68

GARMIN

Carry Case GPS76

Wide top zippered opening and belt loop. Suits GPS76.
D3485

$39.27

GARMIN

eMap GPS Leather Carry Case

The case design allows for easy access to your eMap. Magnetic lock on flap secures the eMap.
D3885

$45.66

GARMIN

eTrex GPS Carry Case

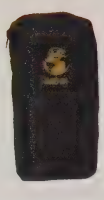
Carry case to suit eTrex and eTrex Summit GPS Systems.
D3886

$39.44

GARMIN

GPS Carry Case

Protective case for your Garmin GPS38/12/12XL/ 2PLUS
D3895



$42.43

PC Cable for eTrex/eMap GPS

Cable features a standard 9-pin D connector. Does not provide wiring for external power.
D3890

$94

DC Power Lead for eTrex/eMap

DC Power lead to suit eTrex or eMap GPS Systems.
D3891

$106

GARMIN

Bike Mounting Bracket for eMap

The bracket has a quick release for removing the eMap for storage.
D3893

$59.48

GARMIN

GPS External Magnetic Antenna

A low profile external antenna with 3.0 metres cable, MCX or BNC connector. To suit most Garmin GPS Products. D3897

$148

GARMIN

GPS Cigarette Lighter Adaptor

Suits Garmin GPS-12 and GPS-38 models. Provides easy power from a 12V DC lighter socket in a car or boat.
D3922

$84

GARMIN

Cigarette Lighter Lead

Cigarette lighter power adaptor for Garmin GPS 12XL, 2plus, 45 and 48.
D3946

$84

GARMIN

Mounting Bracket MKT45 for GPS12/12XL

In car mounting bracket to suit the Garmin GPS 12, 12XL, 38, 45 and 48.
D3955

$69.24

GARMIN

Bluechart MPC409S

Covers the northernmost part of the South Island, from Karamea to Kaikoura, including Nelson. Also covers the southernmost part of the North Island, from Cape Egmont to Uruti Point, including Wellington.
D9024

$248

GARMIN

eTrex Marine Mount

This adjustable marine mount swivels and tilts for optimum viewing and has a locking mechanism to keep unit secure. Accepts optional external power adapter.
D9027

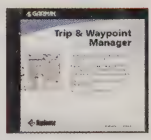
$89.93

GARMIN

MetroGuide Australia

Contains premium detailed maps of major metropolitan areas in Australia – use with any compatible Garmin mapping unit.
D9028

$322



GARMIN

Waypoint Manager

This trip planning CD is designed for use with Garmin units that have no built-in map detail or city point database.
D9034

$66.88

GARMIN

BlueChart CD

Contains detailed electronic nautical charts for several predefined regions in the Pacific - select the offshore region of your choice.
D9038

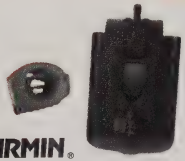
$463

GARMIN

Car Mount for eTrex GPS

This mounting bracket has all the qualities you're looking for: lightweight, portable, adjustable.
D9041

$67

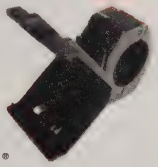


GARMIN

Garmin Bike Mount for GPS76

Snap your GPS unit into this secure handlebar mount and it's ready to ride. Mount fits up to a l one" diameter bar. D9042

$58



GARMIN

Bike Mount for GPSII

Snap your GPS unit into this secure handlebar mount and it's ready to ride. Mount fits up to a one" diameter bar.
D9043

$76.34

GARMIN

Car Mount for Geko

Hold your GPS in place on the dash of your vehicle. Accepts optional external power adapter for quick connection to a DC power supply. D9044

$72

DICK SMITH ELECTRONICS That's where you go!

INDOOR ANTENNAS

Hills
Plug-In Rabbit Ears Indoor Antenna
Plugs into the top of most TVs. Picks up VHF channels I-II in good reception areas.
L4655
$17.33

Hills
Indoor Rabbit Ears Antenna
Ideal for VHF channels 1-11 in good reception areas. Comes with coax plug connection
L4015
$24.96

digitor
VHF/UHF/FM Indoor TV Antenna
Indoor UHF/ VHF/ FM TV antenna Stylish design gives good performance in prime signal areas.
L4017
$27.93

Hills
Deluxe Indoor Rabbit Ears
A quality VHF/FM antenna for use in good reception areas where outdoor systems are inappropriate. The antenna rotates 180 degrees for easy adjustment.
L4011
$31.93

ONE FOR ALL
Indoor Amplified TV Antenna
Built-in wideband Amplified Indoor TV Antenna with Power Loop. Receive UHF/VHF/FM Channels.
L4688
$49.87

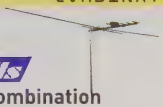
DSE
Amplified Indoor Antenna
With built-in amplifier for boosting TV signal. With power adaptor/ connecting leads.
L4016
$59.93

Indoor Rotating TV Antenna with remote
Amplified, 330 degrees rotating UHF/VHF/FM indoor antenna.
L0020
$59.98

Hills
Deluxe Amplified Rabbit Ears
High quality UHF/VHF rabbits ear with in built amplifier, with strong construction and sturdy base. Suitable for the home/ flat or spare TV in the bedroom.
L0171
$69.88

OUTDOOR ANTENNAS

COMBINATION ANTENNA



Hills
Budget Combination UHF/VHF Antenna
Ideal for metropolitan or good reception areas. It has provision for either vertical or horizontal mounting and features corrosion resistant construction for longer, trouble-free life. VHF 2-11/UHF 21-69.
L4710
$67.43

Hills
Combination Antenna
Ideal for metropolitan and inner fringe reception areas. Corrosion resistant construction for longer life. Pole not included.
L4715
$78.98

BOAT/CARAVAN ANTENNA

Hills
Boat/Caravan UHF/VHF TV Antenna
UHF/VHF antenna with built-in amplifier. Comes in a weatherproof plastic case, mounting bracket and 12V power supply.
L4078
$78.98

OmniPro VHF/UHF TV Antenna
450mm (18") diameter all-band amplified omnidirectional TV/FM antenna for boats, caravans, motorhomes and recreational vehicles.
L4085
$137

OUTDOOR ANTENNAS

Hills
3-Element Lowband Antenna
For picking up VHF channels 1-3. It has high gain over this frequency range. Constructed with corrosive resistant materials for long lasting and can be mounted horizontally or vertically.
L4607
$67.43

Hills
VHF Highband Antenna
For picking up VHF channels 4-11. Constructed with corrosive resistant materials for long lasting and can be mounted horizontally or vertically. The DY6 comes complete with a high quality 'F' type balun.
L4603
$68.98

Hills
VHF Suburban Antenna
7-element VHF aerial channels 1-11. Used from prime to inner fringe. Constructed with corrosive resistant materials for long lasting and can be mounted horizontally or vertically.
L4716
$99.98

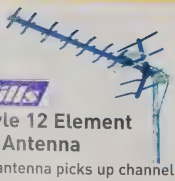
Hills
VHF Suburban Antenna
High-gain 12-element VHF aerial channels 2-11. Used for prime to outer fringe. Snap lock construction with heavy extruded elements and boom.
L4609
$128

UHF ANTENNAS

23-Element UHF Antenna

An up-to-date 23-element design, it receives all UHF channels from 21-69. Provision is made so the antenna can be tilted where necessary and it can be easily mounted on any standard mast. Includes balun for coaxial connection.

L4712 $67.43



Yagi-style 12 Element UHF TV Antenna

This UHF antenna picks up channels 21-69 and has 2 reflectors for improved receptions. It can be horizontally or vertically mounted and features corrosion resistant construction for longer trouble-free life. Pole extra.

L4711 $74.43

Deluxe UHF Antenna

Deluxe, horizontal or vertical, includes balun for coaxial connection.

L4713 $78.98

High Gain UHF Antenna

With 91 elements this antenna is best suited to deep fringe reception areas. It's tuned for reception of channels 21-69 and can be mounted horizontally or vertically. Mounts on standard antenna mast.

L4714 $99.98

TV AMPLIFIERS AND BOOSTERS

Power Booster Antenna Amplifier

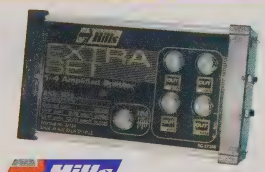
Powered Indoor Amplifier with two outputs for 2 T.V.'s to be connected.

L2105 $69.93

Kingray 2-Way Amplified TV Splitter

This splitter amplifier are designed to amplify television signals. Optimised for both digital and analogue TV signal amplification.

L4219 $99.87



4 Way Splitter/Amplifier

This amplifier is for domestic use in homes with up to 4 outlets.

L4207 $137

UHF/VHF/FM Masthead Amp with Power Supply

Designed for use in areas where signals are weak and require boosting. 25dB Gain on VHF and on 32db UHF.

L0040 $148

TV SPLITTERS

2-Way Plug Type Splitter

Enables you to run two TVs off one antenna outlet.

L4270 $13.93

Right Angle 2-Way Splitter

2 way TV splitter with right angle outlet. 75 ohm sockets.

L4272 $13.33

4-Way Plug Type 75 Ohm Splitter

Permits 4 outlets from one antenna. Fitted with standard coaxial plug and sockets for simple installation.

L4664 $17.43

Two Way Metal TV Antenna Splitter

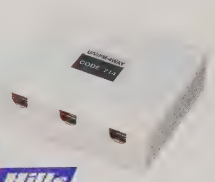
Allows you to run two TVs from one antenna outlet.

L4671 $16.73

2-Way Coax Splitter

75 ohm splitter permits 2 outlets from one antenna. Covers 40-862MHz. Isolation 25dB. Insertion loss 3.5dB. Can be used in reverse.

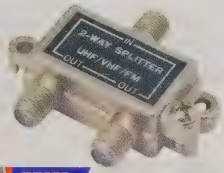
L4472 $10.93



4-Way Coax Splitter

75 Ohm splitter permits 4 outlets from one antenna. Can be used in reverse.

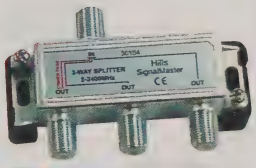
L4474 $15.93



Two- Way 'F' Connector 75 ohm Splitter

Allows the connection of two devices to one antenna. Suits VHF, UHF and FM radio. 75 Ohm.

L4221 $9.83



Three-Way 'F' Connector 75 ohm Splitter

Connect up to three devices to one antenna including your TV, VCR and FM radio. 75 Ohms

L4222 $10.63

TV SPLITTERS & MIXERS

Four-way 'F' Connector 75 ohm Splitter

Simply attach to cable and you can hook up four devices to one antenna. Suits VHF, UHF and FM radio.
75 Ohm.
L4223

$11.73

Indoor VHF/UHF Mixer

Separate VHF and UHF inputs and a single output.
L4663

$18.23

Masthead Diplexer

Housed in a weatherproof enclosure for masthead fixing with 75 Ohm connections. Can be used indoors or outdoors.
L4469

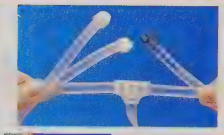
$21.83

TV Antenna Triplexer

This quality triplexer has an input for VHF Low, VHF High, UHF. It combines these signals to a single 75 ohm output.
L2259

$27.43

TV BALUNS, CHOKES, ANTENNA MOUNTING HARDWARE



Indoor FM Radio /TV Antenna

Great as an FM antenna for your tuner or as a VHF TV antenna in prime reception areas.
L4060

$10.93

TV Balun Socket

Simply fixes to the 300 Ohm terminals on your TV and converts it to a 75 Ohm coaxial socket. Ideal for TV games on the old black and white set. Indoor use only.
L4454

$10.63

Universal TV Balun

With 300 Ohm screw terminals and 75 Ohm coaxial plug – can be used either way around. For indoor use, it's ideal if you're not sure which type of balun you require. L4456

$9.33

TV Balun Indoor/Outdoor

For matching 75 Ohm coaxial cable to 300 ohm ribbon terminals on your TV tuner or antenna. It's weather-resistant so can be used indoors or out. L4465

$10.63

TV FM Trap 75 ohm

Filter unit for strong FM signal interference which can create "herringbone" pattern on the TV receiver screen.
L4478

$10.43

U Bolt and V Block Clamp

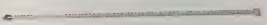
Clamp U Bolt and V Block Set. 8mm. Large.
L4166

$8.93

Extension Vertical Mount

Vertical Extension Mount for vertical polarisation.
L2252

$18.83



Antenna Stay 1.6m Alloy

Antenna Stay 1.6m alloy.
L4679

$24.96

1m Antenna Extension

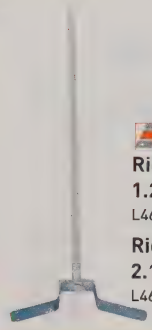
Straight Mast 1 meter extension.
L4631

$17.93

Galvabond Adjustable Stay

Antenna Mast Stay.
L4626

$24.83



Ridge Mount 1.2m
L4628 $28.83

Ridge Mount 2.1m
L4629 $32.83

Antenna Mast

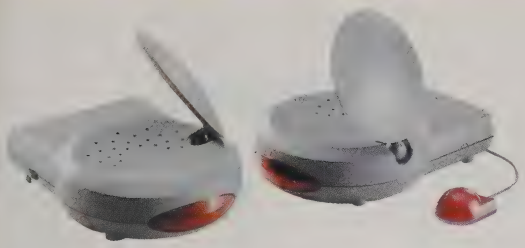
Fascia Mount 1.2m for Barge.
L4642

$22.83

TV Mast

Fascia Mount 2.1m for Barge.
L4641

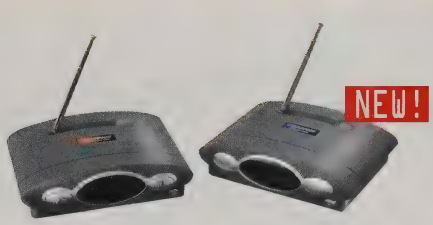
$28.93



GigaAir 2020 Wireless Audio/Video Transmitter

Let's you share sound and images from an audio/video source (e.g. satellite receiver, DVD player, etc.) on TV's located in different rooms in a house, without running cables. L5866

$98



GigaAir2525 2 Input AV Sender

Transmits sounds and pictures from any of your AV devices to a second TV wirelessly. Allows you to connect two AV devices and switch between them. L5960

$168

GigaAir 20R Extra AV Receiver

This is an optional extra receiver for the GigaAir Transmitter and Receiver.
L5867

$58

4 Way Universal Audio/ Video Switch Selector

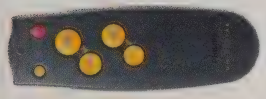
Universal audio/video RCA switch compatible with AV equipment for TVs, VCRs, satellite receivers, CATV, DVD players, PS1/PS2, Xbox and N64 video games consoles. L4680

$29.98

4 Way Connexia AV Selector

Suitable for all audio and visual also for gaming. Converts s-Video to RCA. Simple plug in and play installation. All this in a stylish yet functional design. C2545

$68.98

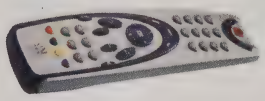


PHILIPS

Universal Remote

This handy remote control is ideal. You can use it to adjust volume and channel as well as power and mute. G0008

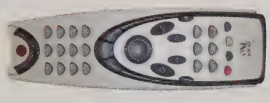
$33



One For All 3 Remote

This device allows you to consolidate existing remotes for TV and VCR. G8675

$48.44



One For All Universal 4 in 1 Remote Control

4-in-1 universal remote that will replace up to 4 remotes. G0144

$57.73

One For All 4 Remote

Operates all brands of TV, VCR, DVD players and digital satellites. Eliminates the clutter of 4 remotes, regardless of brand. G1291

$78.64

One For All Remote URC7562

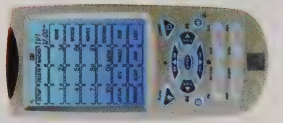
Designed to operate all brands and functions of todays home entertainment systems G7701

$98.22

Kameleon 4-in-1 Universal Remote Control

Touch screen remote control. G1301

$108



DSE

Touch-Screen Remote Control

Ultimate All-in-1 Control of Your Home Theater and other AV Devices! G8073

$132

DSE

USB Cable for Touch Remote

G8074 USB Cable & RemoteComm software provides a convenient interface for configuring menus with the G8073 Universal Touch Screen Remote Control. G8074

$29.22

DSE

60mm Refracting Telescope

Three eyepieces, right angle adaptor, 1.5x erecting lens, 3x Barlow lens, 5x 24 finderscope, and wooden tripod. MgF coated optics.

L8250

$88.97

DSE

114mm Newtonian Telescope

This Newtonian reflecting telescope is ideal for watching the moon or examining the stars. Features a 114mm objective lens, equatorial mount with lapped gears, counter weight, and aluminium tripod.

L8258

$248

MEADE Newtonian 114mmTelescope

114mm Telescope. 900mm focal length.
Full sized Aluminium tripod.
Highest Practical power: 228x
Eyepieces: 9mm, 25, & 2 x Barlow lens.

L8252

ORDER ONLY

$498

MEADE 80mm AZ Telescope

Length of 900mm, equatorial mount, finderscope 6x 30, highest practical power 160x, diameter/aperture 80mm, eyepieces: 9mm, 25mm, and 2x Barlow lens.

L8251

ORDER ONLY

$598

Did you know

REFRACTING TELESCOPES

- Makes the detail of the moon or planets easy to see.
- High magnification capability.
- Light baffles inside the telescopes barrell reducing unwanted light, whilst also increasing the contrast.
- Low maintenance – as easy as caring for a pair of binoculars.

NEWTONIAN TELESCOPES

- Uses both a primary and secondary mirror.
- Wider field of view in comparison to reflecting style telescopes.
- Less likely to be effected by "chromatic abberation". This is an affect, which can create the appearance of haloes around the images within the field of view.
- Most popular amateur astronomical telescope

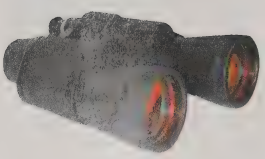
DSE

Binoculars

Lightweight, compact, rubber armoured body. Comes with carry pouch and cleaning cloth.

L8202

$19.98



digitor

10x 50 Binoculars

Ideal for sports, hunting, races, boating, and more. Case and carry strap included.

L8206

$58.44

digitor

10x 25 Binoculars

Ruby coated lens, roll down eye cups and 10x magnification - ideal for viewing sporting events, concerts and on the boat.

L8207

$34.96

Meade Triple Zoom Binocular

7-21x 40mm.

L8219

$198

Mindex Laptop Lock Down

Ultraportable security lock for the frequent traveller.

L8603

LIMITED STOCK!

$34.88

Laptop Security Lock MDXRL2

Safeguard your notebook with this heavy duty nickel lock.

L9500

LIMITED STOCK!

$49.84

Davko Laptop Security Lock OSPBL

Protects against opportunist theft of valuable laptops, and any computers or audio visual items fitted with standard security slots.

L9509

$88.43

Uniden

Car Alarm VS255XR

Easy to install by yourself, and very affordable. Ideal for motor vehicle enthusiast seeking a quality yet affordable protection system for the vehicle.

L9923

$98.27

Uniden

VS1600XR Car Alarm

Ideal for enthusiast and people seeking a high quality protection system for their vehicle with additional features.

4 star rating.

L5366

$147

Uniden

VS2600 Car Alarm

This makes it impossible for a thief to defeat the alarm by identifying the wires or unplugging the alarm.

5 Star Rating.

L5367

$197

DSE

4 Door Central Locking Kit

Suitable for connection to car alarms and immobilisers. Includes all mounting hardware.

L5451

$48.17

Swann

SecuraView System

Modular system with SecuraCam camera with built-in microphone, 5" black and white monitor, and 18m cable.

L5863

$297

Swann

Monitoring System Kit

2 black and white security cameras and 2 identical imitation cameras to deter thieves.

L5921 ORDER ONLY

$398

Swann

Doorbell Video Intercom

See, hear and speak to visitors at your front door when your doorbell rings. Swann DIY Video Intercom sends live black & white images to the monitor.

L5911 ORDER ONLY

$227

SecuraCam For SecuraView

High quality, black & white CMOS lens system, infra-red LEDs. Plugs into TV, VCR or Monitor, power supply included.

L5864

$168

Swann

B&W D-Cam Camera

Connects to your TV, DVR or UCR.

L5915 ORDER ONLY

$148

Swann

Black & White Outdoor Camera

Weather proof with night vision up to 30ft/10m.

L5906 ORDER ONLY

$168

Swann

Colour TV Camera System

High quality colour lens system, the camera delivers crystal-clear pictures to a TV, VCR, or Swann security monitor.

L5910

$198

Swann

Colour Outdoor Security Camera

Ideal for carparks, loading bays, front/back doors.

L5916

$227

Swann BulletCam Colour Camera

Compact, colour, weatherproof security camera that connects to your TV, VCR or security monitor for live viewing or recording. L5909

ORDER ONLY

$198

Day/Night Colour Camera

Ideal for commercial or home use, the Swann Day/Night Cam allows you to keep an eye on your home or office.

L5923 ORDER ONLY

$198

Swann Bulldog Colour Camera

High powered quality colour surveillance camera. High resolution 420TVL CCD.

L5925 ORDER ONLY

$374

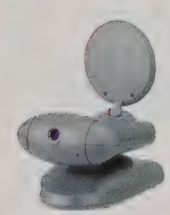
Swann

Colour Camera C510R

Connects to TV or Swann Security Solution.

L5927 ORDER ONLY

$328

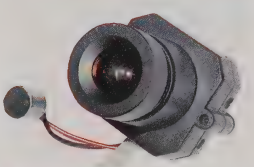


GigaAir 40T Colour Camera 2.4GHz

GigaAir40T 2.4GHz Wireless Color Camera, images and sound signals with a range of up to 100m.

L5892

$128



Swann

SpyCam with Audio

Not much bigger than your thumb! Connect to TV, VCR or Security monitor to receive quality colour images and sound.

L5912

$148

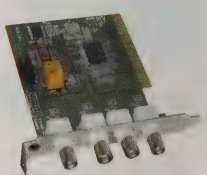
Swann

Wireless MicroCam II

Small camera is extremely portable and ideal for discreet surveillance. Clear colour video images up to 100m. 2.4GHz receiver connected to VCR, TV or monitor.

L5878

$298



Swann

4 Camera Security PCI Card

The Swann PC DVR-4-Net PCI Card seamlessly turns your PC into a sophisticated digital video security monitoring system.

L5907

$228

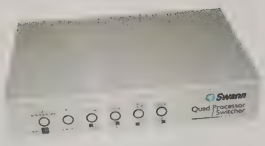
Swann

Digital DVR-DVR GNET

Replaces your quad processor and time lapse UCR. Add a HDD and cameras to create your own DV recording.

L5903 AVAILABLE LATE 2005

$998



Swann

DIY Quad Processor

Colour switcher B&W processor. The Swann Quad Processor is a low cost and convenient solution for monitoring up to four areas in your home or business at once, in real time.

L5913 ORDER ONLY

$148

Swann

AV Multi Switcher

4 channel switch box featuring full auto scanning up to four cameras with adjustable delay from 1-20 seconds. Connect devices to your TV, then switch between them using the supplied remote control.

L5856 ORDER ONLY

$88

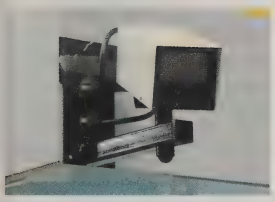
Swann

Motion Triggered VCR

This VHS VCR will record the output of a surveillance camera that has been triggered by a passive infrared detector (PIR). This saves an enormous amount of stress on VCR mechanisms parallel trigger wiring is possible.

L5893 ORDER ONLY

$597



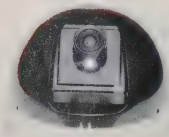
DSE

Dummy CCD Camera

Real metal camera housing with in-built red LED (requires 12V DC). Has coaxial cable with 'BNC' connector to enhance realism.

L5852

$98



digitor

Dummy Dome Camera

Imitation Dome Camera. Ideal as a shop lifting deterrent in retail/home situations, for security support in factories, offices, above doorways and hallways.

L5869

$44.87

Swann

Dummy Security Camera

Practical theft deterrent at a fraction of the cost of a real camera.

L5868 ORDER ONLY

$59.88

Swann

Cable and Power Accessory Pack

Includes 18m (60ft) Audio/Video cable, power adaptor and gender changers to allow cable length extension.

L5859

$24.93

Swann

SpyCam LongView Lens

This LongView Lens will increase the viewable area of your miniature video camera, such as a Swann SpyCam or a Swann DIY SecurityCam.

L5849 ORDER ONLY

$34.98

Swann

Telephoto Lens

The Swann Telephoto lens will increase the viewable distance of your miniature video camera, such as a Swann Audio SpyCam, Swann DIY Security MiniCam, or Swann's TV Camera Observation System. L9502

ORDER ONLY

$49.98

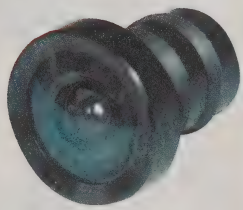
Swann

Wide Angle Lens

The Swann Wide Angle Lens will increase the viewable angle of your miniature video camera up to 90 degrees. Ideally used with the Swann Audio SpyCam, Swann DIY Security MiniCam, or Swann's TV Camera Observation System. L9504

ORDER ONLY

$49.87



Swann

Fish Eye Lens

The Swann Fish Eye Lens will increase the viewable angle of your miniature video camera up to 150 degrees.

L9505 ORDER ONLY

$49.98

ARLEC

Wireless Alarm Kit AM500

Remote-controlled system with 100dB siren, eight-second entry delay, 30-second exit delay, low-battery indicator.
L5746

$147

ARLEC

Extension Siren AM553

Suits AM400, AM500 alarms. 110dB output.
L5749

$29.64

ARLEC

Wireless Reed Switch AM552

Suits AM500 alarm. For door/window protection.
L5748

$29.88

ARLEC

Wireless PIR AM551

Suits AM500 alarm; 8m coverage. Requires 9v battery (not supplied).
L5747

$58.88

ARLEC

External Siren DA307

Suits the L5760 Arlec DA318 System
L5765

$49.88

DSE

Wireless Home Alarm System

Feature packed, totally wireless house alarm with door/window sensor, partial/full alarm, and adjustable siren duration.
L9914

NEW $497

AVAILABLE LATE 2005

DSE

Door/Window Alarm

Recommended accessory for your L9914 DSE 4 Zone Wireless Alarm System. Suitable for doors and windows. Transmits signal to control unit when door/window is opened.
L9916

$49.87

DSE

Panic Button

Recommended accessory for your L9914 DSE 4 Zone Wireless Alarm System Compact key ring design. Panic button. Convenient, full-function operation
L9917

$49.87

DSE

Motion Dectector

Accessory for your L9914 Alarm System. Suitable for rooms, hallways, foyers, walls and corners. Detects motion of moving object and emits wireless signal to control unit
L9915

$59.87

DSE

Alarm Telephone Dialer

Accessory for your L9914 alarm system
L9918

$178

RadioShack Infra-red Beam Alarm

Projects an invisible infrared beam that monitors doorways, windows - any entrance to your home or business.
L8139

$98.87

ARLEC

Infrared Beam Sensor

Great as a door-minder. Simply mount the transmitter opposite the reflector, wire it to the electronic buzzer and you'll have an alarm that's ideal for security as a door-minder.
L5051

$137

DSE

Security Door Entry Chime

Features 3 selectable sounds to alert you to visitors. Has a range of up to 5m. High/Low Volume control and low power consumption.
L7220

$49.93

Intruder PIR Alarm with Keyboard

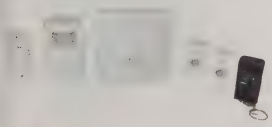
Movement automatically triggers this alarm which sounds an ultra-loud 130 dB siren. Monitors a 7m range in a 60 degree arc.
L5061

$49.93

Mini PIR Alarm with 2 Remotes

Movement automatically triggers 130dB siren. Monitors a 7m range in 60 (degree) arc. Includes two infrared remote controls.
L7228

$62.87



ARLEC

Alarm/Chime Kit Pack

Includes Alarm/Chime Kit DA318 and Door Chime Button DA105
L5760P

$68

ARLEC

Mini Window/Door Alarm

Self contained protection alarm, sounds when window or door is opened. Ultra loud 130dB piezo alarm.
L9503

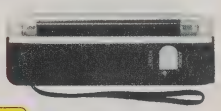
$14.88

DSE

Personal Alarm/Torch

Ideal for night time safety. Loud siren, approx 110db.
L7201

$14.88



DSE

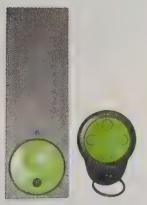
Fluorescent UV Blacklite

The DSE UV Blacklite is ideal for finding UV stamps and is suitable for use with our UV security marker.
L8140

$29.87

UV Security Marker
L8042

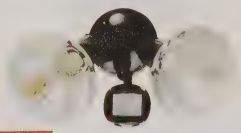
$14.88



Merlin Remote Control Upgrade

433MHz UHF remote control kit suitable for upgrading older garage door openers, upgrading alarm panels, and for use in electronic projects. L7510

$127



elto

Security Light With Bulbs

Automatic motion sensor light with adjustable 'light on' time and lux controls.
L8604

$34.86

Electronic Safe

An affordable anti theft safe, that can be programmed with any 3 to 8 digit code. Includes backup battery and manual override key system, mounting bolts and instruction manual. Requires 4 x 'D' size batteries (supplied).
L8600

Note: this safe is not fire resistant

$68.14

DSE

Metal Siren Cover Mk2

Made from heavy-duty steel with a powder-coated finish. Features pre-drilled mounting holes. Includes a tamper switch.
L5302

$32.44

Rhino

Plastic Siren Cover

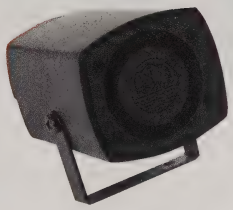
Plastic siren cover made out of Hi-density UV-Proof Polypropylene
L5305

$28.33

Alarm Siren 4" ABS

Sounds an ear-piercing 120dB siren. 12V operation (1.15A). Suits most alarm systems. Size: 120mm (dia.) x 113mm (L).
L7034

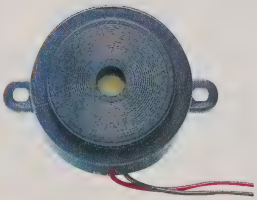
$30.48



Micro Piezo Siren

Micro Piezo Siren with adjustable mounting bracket. 12V DC (250mA) Output: 100dB.
L7029

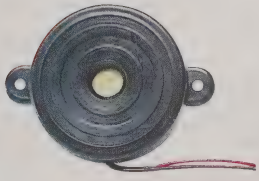
$20.48



Two Tone Piezo Alarm

Emits two-tone warbling sound. Inbuilt driver. 40mm (diam) x 23mm. Mounting holes: 46mm. 9-12 volts (40-50mA). Centre frequency 3kHz, sweeps +/- 50Hz.
L7027

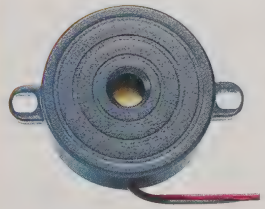
$13.13



Slim Piezo Alarm

Inbuilt driver. 3-30V DC (current 2.5 - 19mA). Output approx. 90dB SPL @ 1m. Centre frequency around 3.6kHz. 32mm (diam) x 13.5 high.
L7024

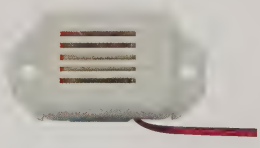
$8.16



Piezo Transducer

5mm high x 30mm diameter. 3-30V p-p AC. Output approx. 80dB SPL @ 1m. Centre frequency: 4.5kHz +/- 0.5kHz.
L7022

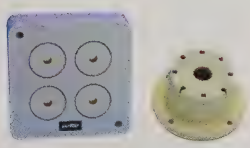
$4.66



Electronic Buzzer

Ideal as local alarm or warning buzzer. Input: 4-15V DC (15mA). Output approx. 70dB SPL @ 1m. 23mm(l) x 17mm(w) x 16mm(h), 26mm hole centres.
L7009

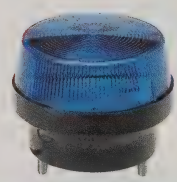
$4.82



Indoor Siren

Replace or add extra indoor sirens to your alarm system. 7.5-15V (200mA) Output: 105dB. Size: 85mm (diam.) x 43mm.
L7025

$26.22



Blue Security Mini Strobe

65mm diameter. 12V DC (150mA) Flash rate: 75/minute.
L6002 Blue
L6003 Yellow

$32.74

SMOKE ALARMS

elto

Smoke Alarm with Hush

Features 8 minute silencer, low battery warning, extra loud sound, functional test button, 9V battery included. L5673

$9.78

First Alert Hush Smoke Alarm

Features special silencing button to quiet the alarm for 3 minutes. 9V battery included. L5123

$29.98

First Alert Smoke Alarm SA67

An affordable way to add a smoke alarm to your home safety plan.
L9925

$19.93

Normally Open Magnetic Alarm Reed Switch Set

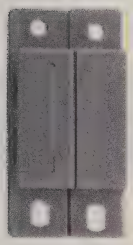
Normally open (N.O) magnetic reed switch set. Rated 30V DC @ 300mA.
L5240

$8.88

Alarm Reed Switch

Magnetic Reed Switch with both normally open and normally closed contacts. Easy to mount. Rated 100V AC/DC @ 500mA.
L5211

$9.44

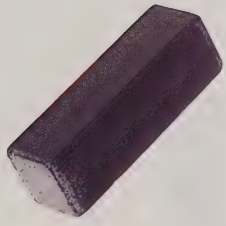


DSE

Normally Closed Reed Switch

Normally open (N.O) magnetic reed switch set. Rated 30V DC @ 300mA.
L7232 MC01
L7233 MC01

$9.77



Bar Magnet

Bar magnet suitable for experimental uses or with magnetic reed switches. Overall Size: 26 x 8 x 8mm. Can be glued to a baseboard.
L5214

$3.88

Digital Access Keypad

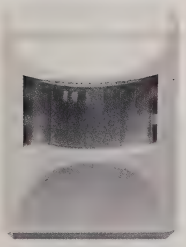
Designed for door strike and security alarm systems. Over 100 million combinations are possible for the user codes and master code.
L5288

$58.97

Security Door Latch 12V DC

Suits video intercom systems.
L5809
LIMITED STOCK

$52



Mini PIR 9038W Detector

12x12 @ 90 degree range. Single-shot or pulse count selectable. With dual element pyro-electric sensor, radio frequency interference filter.
L5018

$54.24

Arlec Mini Window/Door Alarm

Self contained protection alarm, sounds when window or door is opened. Ultra loud 130dB piezo alarm.
L9503

$14.88

Red Car Alarm LED - 5mm

An ideal, easy-to-install flashing security light. Can be wired to ignition as a theft deterrent.
L5322

$13.88

Alarm Warning Property Sticker

Adhesive warning label - place on the inside of your windows.
Size: 130 x 70mm
L5314

$4.93

Lithium Batteries

Commonly used in Digital Diaries. For the longest life in all the popular sizes.

CR2016	S3332	$5.87
CR2025	S3330	$5.88
CR2032	S3331	$5.88
CR1220	S3337	$9.38
CR2450	S0045	$7.87
CR1216	S7127	$9.18
CR1616	S7126	$9.18
CR2430	S7339	$9.18

DSE

Long Life Alkaline Batteries

DSE 40 x 'AA' Alkaline Batteries

2 x AAA	S3183	$3.72	2 x C	S3185	$5.88
4 x AAA	S3184	$5.84	2 x D	S3186	$6.88
2 x AA	S3181	$3.72	1 x 9V	S3187	$5.86
4 x AA	S3182	$5.84	2 x 9V	S4065	$9.72

GP Digi1 Nickel Zinc Batteries

Nickel Zinc Battery

2 x AA	S3201	$4.86
4 x AA	S3202	$6.87

digitor

Heavy Duty Carbon Zinc Batteries

4 x AAA	S3093	$2.87
4 x AA	S3094	$2.87
1 x 9V	S3091	$2.47

Panasonic

Alkaline Batteries

Power up with Panasonic.

2 x AAA	S7226	$4.87
4 x AAA	S7242	$7.86
2 x AA	S7227	$4.87
4 x AA	S7231	$7.86
2 x C	S7228	$6.88
2 x D	S7229	$7.88
1 x 9V	S7230	$6.87

Panasonic

Oxyride Batteries

Oxyride® Extreme Power batteries were developed as a way for you to get longer lasting performance from all of your high drain digital devices. These innovative new batteries last up to two times longer than traditional batteries in most digital cameras.

2 x AAA	S4439	$6.53
4 x AAA	S4440	$11.87
2 x AA	S4437	$6.53
4 x AA	S4438	$11.87

Panasonic

Lithium Camera Batteries

CR1234	S7337	$15.86
ZCR5M	S7348	$18.86

Lantern Battery Replacements

Panasonic

Heavy Duty 6V	S7352	$10.68
Eveready B731 6V	S7353	$20.47

Energizer

e2 Lithium Batteries

Energizer e2 Lithium Batteries provide exceptional life in cameras; they're lightweight and operate well in extreme temperatures.

2 x AA	S3261	$16.87
1 x 6V	S3036	$19.86
1 x CR2	S0107	$12.86

Ultralife 9V Lithium Battery

S3165 $21.88ea

Energizer

e2 Alkaline Batteries

Advanced e2 technology and construction deliver a stronger, more powerful performance.

2 x AAA	S3206	$7.80
4 X AAA	S3207	$13.60
2 x AA	S3204	$7.87
4 x AA	S3205	$13.60
1 x 9V	S3203	$11.40

EZChange Hearing Aid Batteries

Energizer EZ Change removes all consumer dexterity issues from the battery replacement process. With this new dispenser, consumers can now take out their old batteries and replace them with a new one without ever touching the batteries or having to handle those small tabs.

"10"	S3046	$12.86
"13"	S3044	$12.86
"312"	S3045	$12.86

DSE

Alkaline Battery Packs

Full 1.5-volt power, with no mercury added. Independently tested and found to have 90 - 100% as much life as well known branded products.

8 x AAA	S3194	$8.97
16 x AAA	S4066	$12.98
30 x AAA	S4041	$25.74
8 x AA	S3189	$8.97
16 x AA	S4056	$12.98
30 x AA	S3030	$19.98
40 x AA	S4040	$19.97
8 x C	S4058	$15.88
6 x 9V	S4059	$19.88

Energizer Hearing Aid Batteries

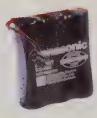
"10"	S3042	$7.80
"312"	S3040	$6.76
"13"	S3039	$6.76
"675"	S3038	$6.87

Super Heavy Duty Battery Packs

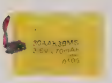
24 x 9V S4021 $24.88

Button Cell Batteries

LR43	S7443	$5.36	371	S7455	$6.87
LR54	S7445	$5.26	395	S7461	$6.88
LR44	S7444	$4.86	391	S7458	$6.86
4LR44	S7422	$7.46	384	S7459	$6.88
357	S3293	$7.86	364	S7454	$6.87
386	S3295	$6.70	377	S7456	$6.88



Battery to Suit Panasonic KXT3806/3826/3716
S7356 **$27.86**



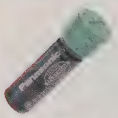
Battery, Suit Panasonic KXA38 Cordless phone
S3421 **$18.00**

Suits DSE 10 Channel Cordless S3430 **$27.86**

Suits Uniden DSS phones S3462 **$29.88**

Battery to suit most Uniden and Panasonic cordless phones
Uniden XC310/320/340/343/360, Panasonic KXT4300
S7361 **$29.98**

Cordless Phone Battery P-P102T/1B - suits Panasonic TC phones
S0269 **$27.86**



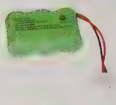
Suits Panasonic KXA37 S3307 **$27.88**

Suits Sony Sp1010/2010 F9839 **$44.86**

Suits Uniden DS71, DS72, DS73 cordless phones
S9103 **$27.88**

Suits DSE cordless, F9971, F9973, F9974
S9104 **$27.88**

Cordless phone Battery - suit DS815/25/45
S7429 **$39.86**

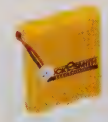


Cordless phone Battery - suit Belcom 4010 Series
S3512 **$30.00**

C/less ph Batt Suit Uniden XC633/630 S3511 **$27.86**

Battery to Suit Tele 1150 Cordless Phones
S7358 **$27.86**

Suits James Hardie Cordless S7360 **$20.00**



Suits GEC w/ph, Telecom 200/400 S7359 **$20.00**

Battery to suit most Sanyo cordless phones
S6178 **$27.88**

Suits Uniden Profile S3509 **$18.00**

DSE Rechargable NiCad BATTERIES

Code	Size	mAh	QTY	Price
S3300	AA	600mA	ea.	$5.46
S3301	C	1.2A	ea.	$2.70
S3304	AA	100mA	ea.	$7.56
S3141	AA	700mA	2	$9.60
S3412	AAA	300	2	$9.88
S3143	C	2500	2	$19.80
S3144	D	4500	2	$21.70
S3140	AA	750	4	$17.70

DSE Rechargeable NiMH BATTERIES

Code	Size	mAh	QTY	Price
S0270	C	2150	2	$19.80
S0271	D	2150	2	$19.80
S3149	AA	1700	2	$16.83
S3147	AAA	700	2	$14.87
S3148	AA	1700	4	$28.81
S3153	AA	200	4	$33.80
S3146	9V	150		$19.78

Panasonic

Sealed Lead Batteries

These Lead Acid sealed batteries require no maintenance, are leak proof and can be either trickle charged or fast charged.

Code	Voltage	AH	Price
S3453	12V	1.3AH	$28.87
S3456	12V	2.3AH	$37.86
S3452	12V	2.3AH	$37.86
S3454	12V	7.0AH	$47.88
S3388	6V	12.0AH	$40.00
S3389	6V	5.0AH	$19.86

S3453

S3456

S3452

S3454

S3388

S3389

BATTERY CHARGERS

DSE

12 Volt Lead Acid Battery Charger

Specifically designed for sealed lead-acid batteries. Features electronic regulator circuitry with built in voltage reference which controls battery charging over a range of mains input voltages. M9531

$34.80

Stadium

2.5A Car Battery Charger

12V 2.5A charger features a battery condition analyser function, offers short circuit protection, and a strong flame retardant case. M9805

$29.80

Stadium

Battery Charger 12V 4A

LED display for 12-volt batteries used in cars, caravans and boats. An automatic charging mode to hold batteries to full charge and a condition analyser function. M9806

$59.80

DSE

9.6V NiCad Battery Charger

This low cost battery charger will charge your 9.6 volt racing car NiCad battery pack in only 2.5 to 3 hours. M9618

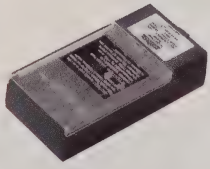
$19.80

DSE

NiCad Battery Charging Cabinet

Charges up to 8 'AA' or 'AAA' NiCads or up to 4 of these plus two 9V cells. M9508

$14.98



digitor

Battery Charger

This NiCad and NiMH charger is ideal for 2 or 4 x "AAA", "AA", "C", "D" batteries or up to 2 x 9 Volt cells. M9403

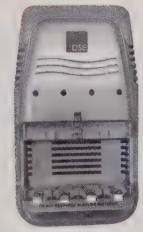
$19.98

DSE

NiMH/NiCad 1-Hour Charger

Charges up to 4 'AA' or 'AAA' batteries. Batteries not included. M9557

$49.93



GP Overnight Charger with 4 x AA Batteries

4 x AA 1600mAH NiMH batteries. Great for digital cameras and other high drain devices. S4057

$34.87

GP Charger with 4 x AA Batteries

High speed 2 hour battery charger plus 4 x AA 1800mAH NiMH batteries. Great for digital cameras, MD players, portable televisions. S8905

$59.86

DSE

1 Hour Charger with 4 x AA 2000mAh NiMH Batteries

NiMH/Nicad charger with 4 x "AA" 2000 mAh NiMH rechargeable batteries. S4060

$79.97

DSE

Radio Controlled Car 7.2V Battery Charger Pack

Charger plus rechargeable 7.2V 2000mAh battery. S4061

$39.86

Mini Bi-Pin Bulb

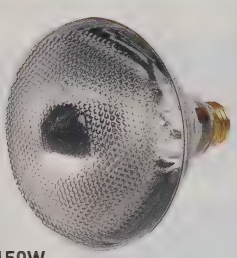
Suitable for many car alarm warning lights as well as our illuminated switches. 12V. 60mA. Suits P7580/82/84/86, etc
P8158

$3.48

Pigtail Neon Bulb

Used in indicators, timing circuits, etc. Striking voltage 70-90 volts @ 600uA. For 240 volts use 220K 1/4W resistor in series.
P8160

$1.23



PHILIPS Par 38 Bulb 150W

Quality high wattage bulb commonly used for sensor light systems, including our Arlec Security Floodlights.
S5129

$5.98

PHILIPS Fridge GlobePilot Clear15W SBC

For use where space is limited and/or low lighting levels are required .
S8376

$5.36

PHILIPS Bulb T22 Oven Lamp 15W SES

For use in oven and microwave applications up to 300°C.
S5043

$6.87

elite 3u Energy Saver Globes

Bayonet Globes

Code	Description	Price
S9002	15w	$4.87
S9004	20w	$4.87

Edison Globes

Code	Description	Price
S9001	15w	$4.88
S9003	20w	$4.88

elite Bayonet Bulbs

Frosted Globes

Code	Description	Price
S9005	60w	$0.88
S9006	75w	$0.88
S9007	100w	$0.88

elite 100w R80 Floodlight Globe

S9008 $1.88

elite Bulbs

Sprial 20w Energy Saver Lamp

Code	Description	Price
S9010	Bayonet	$5.88
S9009	Edison	$5.87

Garden light 3w Globe - 2 Pack

12volt, 3watt, wedge bulb, 2 bulbs per card. Suits MP8810 - elto 6pc Garden Light Set
S7431 $5.86

elite 75w R80 Floodlight Globe

S9011 $1.87

PHILIPS Bulb Spotline Reflector 60W ES

Code	Description	Price
S8432	R63 30°	$4.66
S8433	R80 25°	$4.66

Bulb Floodline Reflector Lamp 75W ES

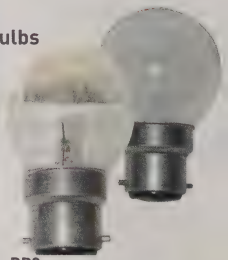
Code	Description	Price
S5080	R080 80°	$4.66

PHILIPS GLS Bulbs

The GLS (General Lighting Service) lamp is a high-efficiency purpose lamp with an average life of 1000 hours.

Code	Description	Price
S8309	100w Clear	$1.08
S8307	75w Clear	$1.18
S8318	60w Frosted	$1.08

PHILIPS Lustre BP2 Bulbs

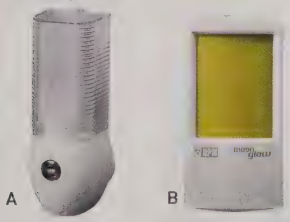


40W Clear Lustre BP2

Code	Description	Price
S8428	40w Clear	$6.46
S8429	40w Frosted	$6.46

Night Lights

Automatically turns on when darkness falls.

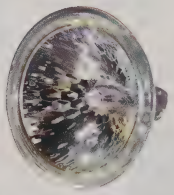


	Code	Description	Price
A	M7526	DSE Night Light	$7.73
B	M7240	HPM Night Light	$14.91

PHILIPS Bulb Standardline GU5.3 Closed Halogen 12V 50W

Standardline low voltage dichroic halogen lamp.
S8456

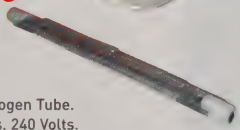
$10.88



elite Halogen 250w Tube

Double Ended Halogen Tube. 118mm, 250 Watts, 240 Volts.
S0273

$6.88



Replacement Night Light Bulbs

Suits autonight light M7526
S3991

$5.87

Halogen 10w Garden Light Bulbs

Suitable for garden lamps and desk lamps. Low voltage halogen capsule, 12 volts, 10 watts, two pin. 2 pack.
S0272

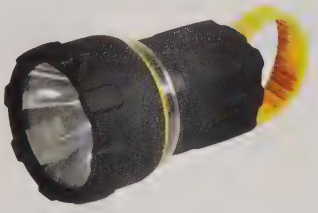
$5.87

Energizer Microlight Torch
It's small but bright enough for most needs! Water, corrosion resistant and shockproof. Y2175

$16.60

Energizer 2 in 1 Lantern
Doubles as a spot beam and an area light, this rugged torch is ideal for camping, outdoor exploring, household, workshop and blackouts. Requires 4 x 'D' batteries (not included).
Y2294

$36.46



DSE

Rechargeable Halogen Spotlight
Rechargeable Halogen Spotlight with 1 million candle power. Includes AC charger and car charger for use with cars with cigarette lighters.
Y4001

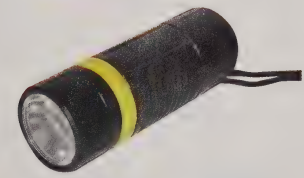
$19.80

Floating Torch
Waterproof indoor/outdoor torch, perfect for fishing, sailing and camping. Requires 2 x "D" batteries (not included).
Y1207

$12.80

2 in 1 LED Flashlight
2 in 1 spotlight / arealight super bright LED torch. Requires 3 x AAA batteries not included.
Y1215

$12.47



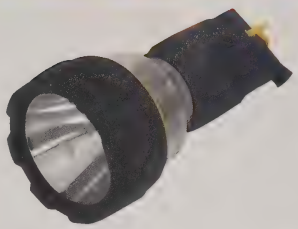
DSE

Weather Proof Solar Torch
Water-resistant with bicycle mounting kit, flashing LEDs and warning light.
02045

$25.48

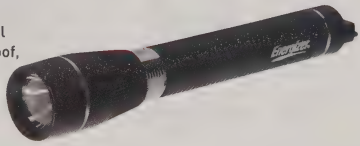
Energizer 2 in 1 Torch
Doubles as a spot beam and an area light, this rugged torch is ideal for camping, outdoor exploring, household, workshop and blackouts. Requires 4 x 'A' (not included).
Y2293

$26.40



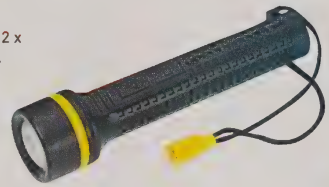
Energizer Professional Series Torch
The Energizer Professional Series torch is weatherproof, corrosionproof, and shockproof. It has a precision focus beam and is powered by 2 x 'AA' batteries (not included).
Y2295

$19.40



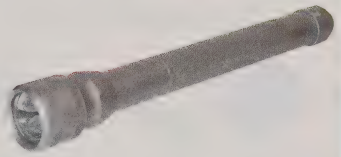
Rubber Torches
Great for the outdoors. Uses 2 x "AA" batteries (not included).
Y2139

$5.40



LED "AA" Aluminium Flashlight
Ultra bright LED Aluminium torch. Requires 3 x AA batteries not included.
Y1209

$19.86



2 in 1 LED Flashlight
Aluminium torch powered by 2 "C" batteries.
Y1217

$19.86

Swann

Shake 'n' Charge Torch
15-30 seconds of shaking will get you 5 minutes of continuous bright light with its built-in LED.
02047

$29.93

PIGGY BACK EXTENSIONS LEADS

HPM

Piggy Back Extension Lead

1 metre	M7080	$6.88
2 metre	M7081	$8.93
4 metre	M7082	$12.53
6 metre	M7083	$16.44
10 metre	M7084	$19.32

SIDE ENTRY EXTENSIONS

elto

Side Extension Lead

2 metre	M7351	$7.82
3 metre	M7352	$9.61
5 metre	M7353	$11.27
7 metre	M7354	$14.66
10 metre	M7355	$17.28

SWIVEL HEAD EXTENSIONS LEADS

ARLEC

Swivel Head Extension Lead

2 metre	M7362	$9.12
3 metre	M7363	$11.37
5 metre	M7364	$13.74
7 metre	M7365	$16.77
10 metre	M7366	$22.14

GARDEN LEAD

HPM

Heavy Duty Garden Lead 25m

Plug Boss is a new range of workshop power accessories designed by HPM to handle tough conditions and withstand a harsh working environment.

M9445

$38.86

HIDE-A-LEAD

HPM

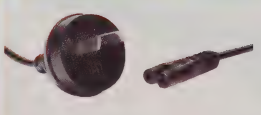
Hide-A-Lead Extension Cord 1.5m

Ideal for kitchens & leaves no unused lead exposed.

M7336

$6.93

MAINS LEADS



Universal Mains Lead

The figure 8 type socket is used on audio and entertainment equipment.

W1360

$8.94

IEC Male/Female Extension Lead

Ideal for connecting printer or monitor to your computer.

W1366

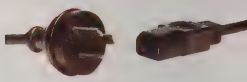
$10.94

Mains Appliance Lead

Grooved IEC line connector designed for domestic appliances such as TVs, electric kettles, rice cookers, etc.

W1391

$19.93



IEC Mains Lead

2-metre mains lead with an IEC socket.10amp rated. Used with computers and communication equipments.

W1362

$10.62

Dual IEC Mains Lead

A unique 2 metre long mains lead with a pin mains plug on one end and two IEC sockets on the other. Run your PC and monitor from the one powerpoint - ideal for saving space on cluttered powerboards.

W1352

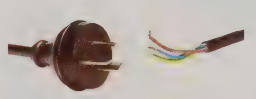
$16.92

IEC Mains Lead - Right Angle

2 metre mains lead with a right angle IEC socket. 10amp rated.

W1375

$11.94



Mains Cable With 3-Pin Plug

Light duty cable (240V AC @ 10A) fitted with standard 3-pin plug on one end. The other end is bare ready for connection to your project.

2 metres long.

W2057

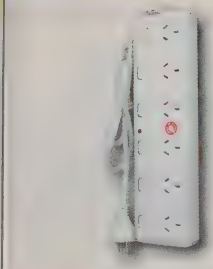
$6.48

Figure 8 Mains Lead with Earth

2 metre long lead with 3 pin mains plug on one end and earthed figure eight connector on the other. Suitable for use with many laptops.

W1350

$9.94



ARLEC

6 Way Switched Surge Board
M7148

$37.52

Zap

22 6 Way Surge Board
22,000 Amps, 540 Joules, 1-3 nanoseconds, single stage RMI/EFI Filtering.
M7396

$69.94

Zap

33 6 Way Surge Board
33,000 Amps, 765 Joules, 1-3 nanoseconds, Dual Stage RMI/EFI Filtering.
M7397

$98.56

Zap

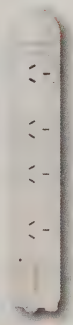
44 6 Way Surge Board
44,000 Amps, 1,265 Joules, 1-3 nanoseconds, Dual stage RMI/EFI filtering.
M7398

$127

Zap

55 6 Way Surge Board
55,000 Amps, 1,500 Joules, 1-3 nanoseconds, Dual Stage RMI/EFI Filtering
M7399

$143



intaract

Surge Guard 4 Way Board
3,500 Amps, 345 Joules, 25 nanoseconds
M7390

$25.28

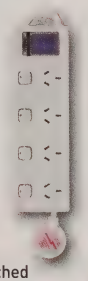
Also available 4 Way Surge Guard Board with phone protection.
M7391

$29.87

intaract

Surge Guard 6 Way Board NZ
13,500 Amps, 345 Joules, 25 nanoseconds
M7392

$29.64



HPM

4 Way Surge Switch Board
4 individually switched power outlets all MOV surge protected on a tidy 4-way board.
M7165

$33.52

Also available 6 Way Surge Guard Board with phone protection.
M7393

$34.92

intaract

Surge/Spike 5 Way Board NZ
15,000 Amps, 400 Joules, 1-3 nanoseconds , single-stage RMI/EFI Filtering.
M7394

$39.81

intaract

Surge/Spike 5 Way Board Tel NZ
15,000 Amps, 400 Joules, 1-3 nanoseconds, single stage RMI/EFI Filtering
M7395

$49.58

intaract

Surge Guard Adaptor Single
13,500 Amps, 345 Joules.
M7387

$12.64

intaract

Surge Guard Adaptor Double
Dual socket surge and spike protection with visual status indicator. Peak energy absorption 345 Joule.
M7389

$16.44

intaract

Surge Guard Adaptor
13,500 Amps, 345 Joule.
M7388

$19.83

intaract

Surge Guard Adaptor Single Telephone
Surge and spike protection for both power and telephone connections. Ideal for faxes, laptops, and cordless phones.
M7386

$25.28

BELKIN

8-Way Surge Board
It provides the most complete protection from power surges, spikes and AC contamination available.
M7406

$198

DC POWER ADAPTORS

DSE

DC Power Supply 9V 200mA

Suitable for equipment that uses 9V DC or a 9V transistor type battery such as cassettes and transistor radios. Comes with 3.5mm plug (tip positive) and simply plugs into mains. M9614

$14.67

DSE

DC Power Supply 9V 600mA

A high-power, fixed-voltage 9V supply suitable for equipment that needs that little extra power. Supplied with multi-way output adaptor. Selectable polarity.
M9560

$16.67

digitor
Adaptor
3-12V DC 200mA

Unregulated DC power adaptor with multi-plug output adaptors and selectable polarity ideal for home use.
M9646

$19.67

digitor
Adaptor
3-12V DC 500mA

Unregulated DC power adaptor with multi-plug output adaptors and selectable polarity, ideal for home use.
M9647

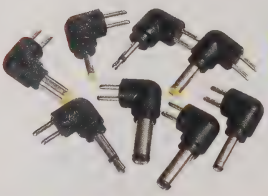
$24.94

DSE

Regulated Adaptor 3-12VDC 0.5A

Ideal for games, radios and cassette players. Has 6 selectable voltages.
M9727

$36.67



DSE

DC Voltage Adaptor Set

Male:2.5, 3.5. Female: 0.7, 1.7, 3.5, 5, 5.5.
M9600

$7.67

DC POWER ADAPTORS (INTERNATIONAL)

DSE

International Adaptor 12V

AC power adaptor supplied with multiple plugs. Volts: 12, Ma: 600.
M9935

$29.87

DSE

9VDC Power Adaptor

AC power adaptor supplied with multiple plugs. Volts: 9, Ma: 800.
M9933

$29.87

DSE

6VDC Power Adaptor

AC power adaptor supplied with multiple plugs. Volts: 6, Ma: 1000.
M9932

$29.87

DSE

4.5VDC Power Adaptor

AC power adaptor supplied with multiple plugs. Volts: 4.5, Ma: 1200.
M9931

$29.87

DSE

International Adaptor (3-12V)

Regulated 3-12V DC output allows you to power a range of small devices. Accepts input voltages from 90-260V AC and is supplied with 7 common DC plugs
M9927

$39.97

DSE

International Power Adaptor (5-23V)

5, 7.5, 12, 15, 18, 23V DC @ 1A-300mA
M9926

$39.97

DC POWER SUPPLIES

Digitor Adaptor 6/7.5/9/12VDC 1A

Unregulated DC power adaptor with multi-plug output adaptors and selectable polarity.
M9648

$38.96

DSE

DC Power Supply 12V DC @ 1 Amp

This high-power supply comes in a compact plug-in style case and is ideal for a wide range of applications including alarm systems and intercoms. M9670

$29.96

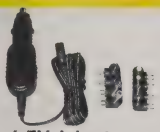
DSE

AC Plug Pack 12V AC @ 1 Amp

Supplied with 2.1mm and 2.5mm reversable female power plugs both with 5.5mm shaft length.
M9656

$26.93

12V/24 AUTOMOTIVE VOLTAGE ADAPTORS



24/12V-4.5V Adaptor

Converts 24 Volt or 12 Volt to 4.5 Volt output at up to 0.7 Amps. Supplied with an assortment of plugs. M9887

$28.66

Adaptor 24/12V-6.0V @0.7A Auto

Converts 24 Volt or 12 Volt to 6.0 Volt output at up to 0.7 Amps. Supplied with an assortment of plugs. M9888

$28.66

DSE

Multi-Voltage Adaptor 800mA

Plugs into car cigarette lighter socket to run battery powered devices.
M9683

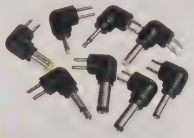
$29.93

DSE

DC Adaptor 1.5-12VDC 1.5A

An adaptor designed to provide stable and clean DC power with minimal strain on the car's electrical power source.
M9889

$39.93



DSE

DC Voltage Adaptor Set

Male:2.5, 3.5. Female: 0.7, 1.7, 3.5, 5, 5.5.
M9600

$7.67

DSE

Right-Angle Adaptor Plug lead set

Contains 6 versatile adaptors and an 1.8m DC lead.
M9603

$12.92

LEAD ACID BATTERY CHARGERS

DSE

12 Volt Lead Acid Battery Charger

Plug-in battery charger specifically designed for sealed lead-acid batteries. Features electronic regulator circuitry with built in voltage reference which controls battery charging over a range of mains input voltages.
M9531

$34.88

DSE

Arlec 12V/6V Charger

Selectable 6V or 12V at 1 Amp output. Battery clips allow for easy connection to a variety of batteries.
M7521

$34.88

Stadium

2.5A Car Battery Charger

Features a battery condition analyser function, short circuit protection, and a strong flame retardant case.
M9805

$29.86

Stadium

Battery Charger 12V 4A

For car, boat or caravan lead acid batteries. Boost and automatic functions.
M9806

$59.82

AC POWER SUPPLIES

DSE

AC Plug Pack 12V AC @ 1 Amp

Supplied with 2.1mm and 2.5mm reversable female power plugs both with 5.5mm shaft length.
M9656

$26.93

DSE

AC Plug Pack 16V AC @ 1.5 Amp

Suitable for small TVs, keyboards, etc where power demands are heavy. It's double insulated for added safety. Supplied with 2.5mm plug. M9668

$41.83

DSE

AC Adaptor 24V

An extremely useful power source. This inline power adaptor can provide 24V AC @ 1.5 Amps and is supplied with a multi-way output adaptor. M9635

$55.44

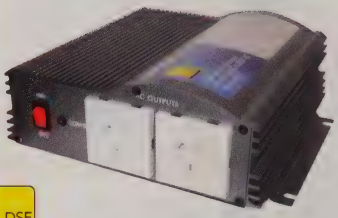
INVERTERS

Inverters can be plugged in the lighter socket or directly onto the battery terminals of your car, boat (or any 12V power source) to provide 230V AC power for most electrical equipment. Great for smaller televisions and VCRs, personal computers, small kitchen appliances and other 230V devices that you may want to use in remote locations. They all have electronic overload and temperature shutdown.

Typical Wattages and Battery Drain for Common Appliances

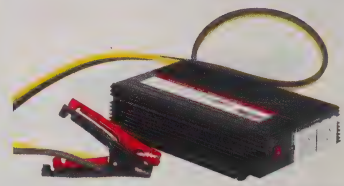
Device	Wattage	Battery Drain in Amps	Device	Wattage	Battery Drain in Amps
Fridge 3701	750	69	Hair Dryer	1000-1500	92-138
Microwave	1400-2000	129-185	VCR	20	2
Washing Machine	400	37	Jug	1800-2200	166-203
Television 14" 70	6		Computer Desktop	300	28
21"	120	11	Laptop	150	14
29" 200	19		Monitor 15"	400	37
Stereo Microsystem	50	5	17"	560	52
DVD Player	20	2	Vacuum Cleaner	800-1400	74-129
CD Player	20	2	Lightbulb 240V 100V	100	9
			240V 75W	75	7
			12V 20W	20	2

Values shown are indicative only and will differ from device to device. Current requirements are commonly listed on appliances and these will give the best indication of the actual power required by the device. Certain appliances, such as microwaves and washing machines, can be sensitive to the waveform of the power. Battery Drain based on using an inverter with 90% efficiency.



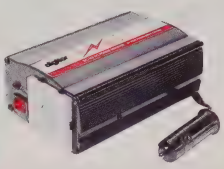
DSE

300W Sinewave Inverter
300W True Sinewave inverter with up to 90% efficiency.
M5113/M5213
$328



DSE

Inverter 12V-240V 800W
Input Voltage: 10.7-14.5V (12V Nominal)
Output Wave Form: 50Hz Modified Sine wave
Output Power: 1000W (Surge)
800W (25 mins)
650W (Continuous).
M5102
$298



digitor

Inverter 12V-240V 150W
DC Input Voltage: 10-15 Volt (12V Nominal)
Output Power: 160W (surge) 150W (continuous)
Output Wave Form: Modified Sine wave
M5110
$98

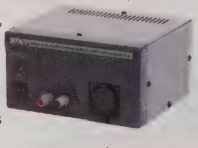
digitor

Inverter 12V-240V 300W
DC Input Voltage: 10.5 - 15Volt (12V Nominal)
Output Power: 310W (surge) 300W (continuous)
Output Wave Form: Modified Sine wave.
M5111
$148

13.8V SUPPLIES

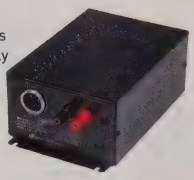
13.8V DC Power Supply Unregulated
An unregulated power supply ideal for portable TVs and car radios. It has a power rating of 13.8V DC at 1.5A. (18V max.)
M9544
$68.98

13.8V Power Supply
Ideal for the workshop, this DC power adaptor comes with banana posts, a cigarette lighter socket and an on/off switch. Provides regulated 13.8V DC output at 2A (4A, 50% duty cycle). M9540
$98.98



13.8V DC Power Supply @ 4A Peak
Ideal for high-current, high peak demand applications. 3-amp continuous (or 4A continuous @ 75% duty cycling). Ideal for small HF transceivers, as a bench supply, or a supply for 'auto' equipment.
M9547
$137

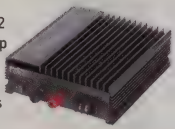
13.8V DC Power Supply @ 5 Amp/7 Amp Surge
With a 5 amp continuous rating and able to supply up to 7 amps during surges, this supply is ideal for amateur transceivers, bench supply or running auto stereo equipment. Comes with a cigarette lighter socket. M9546
$167

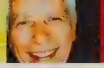


24V TO 12V CONVERTERS

Converter 24V DC to 12V DC 2A
Converts 24V to 12V DC with a 7 Amp surge. Gives 13.8V @ 2 Amps continuously with a 7 Amp surge rating. This sturdy regulated supply is ideal for running CBs and stereo systems in vehicles with a 24V system.
M9813
$58.98

Converter 24V DC to 12V DC
Converts 24 volts to 12 volts DC with a 25-amp surge. Output of 13.8 volts at 20 amps DC continuously (25 amps surge rating) from a 24-volt supply.
M9814
$143





POWERBOARDS

HPM

4 Way Power Board
4 outlet powerboard with 1 metre lead and overload protection.
M9908

$3.67

HPM

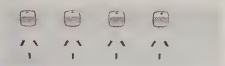
4-Way Long Lead Power Board
Long lead 1.8m. For all those awkward spots where the power-point is out of reach. M7263

$7.82

HPM

6 Way Powerboard
1m cord, with overload cut out.
M7128

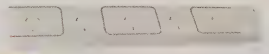
$7.96



HPM

4-Way Switched Power Board
Individually switched power outlets on a tidy 4-way board. Rated 10A.
M7133

$14.66



HPM

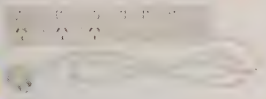
5 Way Plug Pack Board
This new Powerboard has 3 in-built wide spaced outlets. Don't waste the use of outlets on your powerboard because of plug-in transformers that make outlets located on either side unuseable.
M7237

$14.97

HPM

8-Way Mains Power Board
Changes a single powerpoint into eight outlets and features overload protection. With a 1-metre cord.
M7118

$17.96



HPM

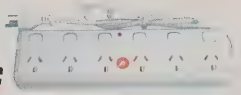
6 Way Switched Powerboard
6 outlets with individual switches. Includes 3 childproof safety plugs to keep children's fingers and other object from accessing power. Wide spaced for up to 2 plug-in transformers. M9441

$19.86

HPM

4-Way Surge Switch Board
4 individually switched power outlets all MOV surge protected on a tidy 4-way board. Features visual protection status indication.
M7165

$33.52



ARLEC

6-Way Switched Surge Board
Slimline Power Board - 6 outlet, each with individual ON/OFF switch.
M7148

$37.52

MAINS DOUBLE ADAPTOR

elto

Vertical Double Adaptor
2 plug double adaptor.
M7444

$2.38

elto

Angled Mains Double Adaptor
2 plug double adaptor.
M7445

$3.26

HPM

Mains Power Double Adaptor Slim - Left
Projects to the left of the powerpoint, turning a single outlet into a double socket.
M7106

$4.93

HPM

Mains Power Double Adaptor Slim - Right
Projecting to the right of the powerpoint, this is ideal for limited spaces. M7107

$4.93

Mains Power Surge Double Adaptor
Protect up to 2 devices with this surge/spike filter.
M7153

$9.97

HPM

Hide-A-Lead Extension Cord 1.5m
Ideal for kitchens - leaves no unused lead exposed.
M7336

$6.93

NOTEBOOK POWER SUPPLIES

Kerio 90W Notebook Auto Adaptor
Car or plane power adaptor for laptops and notebooks requiring up to 90W.
M9694

$168

Kerio 70W Universal AC Adaptor
Notebook Laptop Power Supply.
M9698

$148

Targus Universal 120W Auto/Air Power Adaptor
Provides up to 120 watts of power. Allows you to power or charge a variety of electronic devices.
M9691
Order only.

$332

Although not necessarily shown, all plugs conform to NZ saftey standards.

DSE

Figure 8 Male Chassis Connector

Rated 2.5 Amps.
M7098

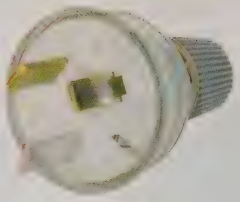
$1

HPM

3-Pin Plug - Clear

10 amp, 3 pin plugs. With collar to hold cable.
M7002

$5.93



HPM

3-Pin Plug -Grey

10 Amp, 3 pin plug with collar to hold cable.
M7007

$5.97

HPM

3-Pin Plug - White

10 Amp, 3 pin plug with collar to hold cable. White.
M7000

$5.92

HPM

3-Pin Side Entry Plug - Grey

10 amp, 3-pin plug with cord entry at side.
M7006

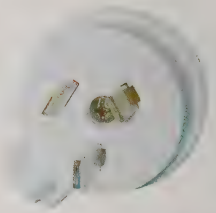
$6.67

HPM

3-Pin Side Entry Plug - White

10 Amp, 3 pin side entry plug. Flush fitting, ideal for behind furniture. White.
M7013

$6.68



Mains Power Plug 2 pin AC flat

GREY flat 2 pin 240V AC plug, similar to American plug type. M7416

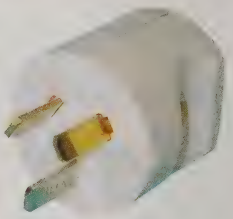
$3.97

HPM

Back Entry 3 Pin Plug - White

230V 10-amp rated back entry 3 pin plug.
M7459

$6.48



HPM

3-Pin Socket - Clear

10-amp, 3-pin line socket for extension cords etc.
M7022

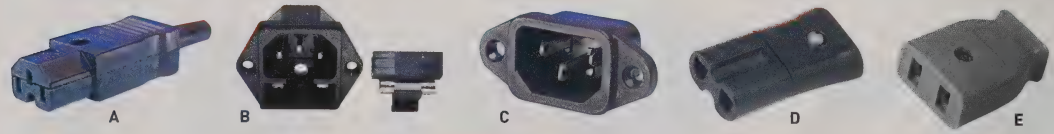
$11.21

HPM

3-Pin Socket

10 Amp, 3 pin socket with collar to hold cable. White.
M7018

$10.91



A	Mains Power IEC Female Line Connector	M7060	$12.01		
B	IEC Male Chassis Connector Fused	M7068	$4.81		
C	Mains Power IEC Male Chassis Connector	M7066	$4.93		
D	Mains Power Piggy Back Plug	M7417	$1.24		
E	Mains Power Socket 2 pin AC flat	M7419	$3.44		

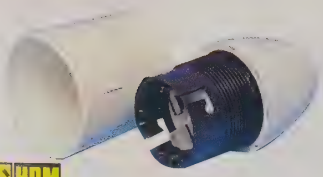
HPM

Mains Batten Mount Bayonet Lamp Holder

Batten mount for standard Bayonet Cap globes. Fixed position.

M7029

$12.42



HPM

Mains Cord Grip Bayonet Safety Lamp Holder

Bayonet fitting Cord grip Lamp holder.

M7026

$8.33

HPM

Mains Cord Bayonet Lamp Holder with Switch

Lamp holder fits standard 10A cord and has push-bar switch for standard lamps etc.

M7027

$18.68

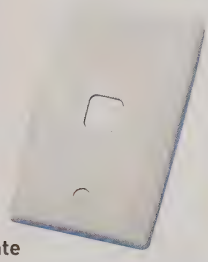
HPM

Mount Block Surface

Suitable for all powerpoints and light switches.

M7045

$5.74



digitor

Insert Wall Plate

Standard size plate suits P2054 & P2056.

P2053

$4.93

DSE

Insert Wall Plate

Architrave plate suits P2054 & P2056.

P2051

$3.93

HPM

Mains Wall Plate

Blanking plate for standard wall fitting.

M7046

$4.56

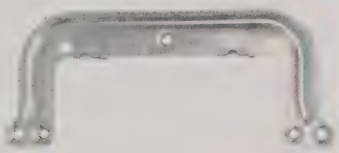
HPM

Mains Switch or Powerpoint Mounting Block

For wall mount powerpoints, switches etc where flush mounting is not possible. Suits standard wall plate switches etc.

M7042

$4.67



HPM

Mains Light Switch Wall Board Clip

Allows flush mounting of wall plate switches, powerpoints etc on cavity walls e.g. plaster, timber (not brick).

M7040

$3.26

HPM

Mains Power Line Switch

Ideal for standard lamps etc. Simply wires into power cord. Rated at 10 amps.

M7056

$17.44

HPM

Double Wall Switch White

Standard wall fitting with double switch. Rated 10 Amps.

M7037

$16.81

HPM

Single Wall Mains Light Switch

Standard wall fitting with a single light switch.

M7036

$9.76

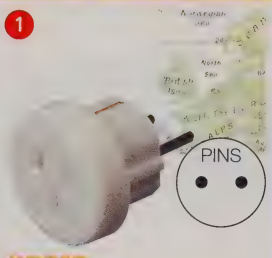
KORJO

Travel Adaptor - 3 Pack

3 pack to fit USA, UK and European plugs. Does not convert voltage.
M7310

$29.93

1



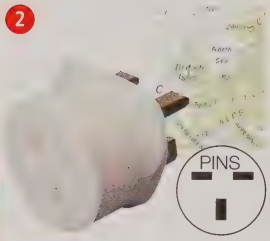
KORJO

Travel Adaptor New Zealand to Europe

Converts New Zealand mains plug to fit European style. Also Bali, Noumea, Tahiti, parts of Middle East, Asia and South America. Does not convert voltage.
M7314

$14.92

2



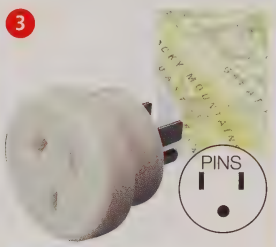
KORJO

Travel Adaptor New Zealand to UK

Converts New Zealand mains plug to fit UK, Ireland, Singapore, Hong Kong, parts of the Middle East and Africa. Does not convert voltage.
M7312

$14.92

3



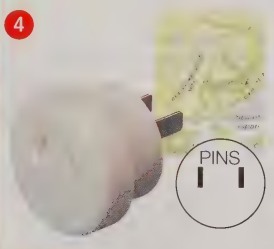
KORJO

Travel Adaptor New Zealand to USA

Converts New Zealand mains plug to suit USA and Canadian style plugs. Does not convert voltage.
M7316

$14.92

4



KORJO

Travel Adaptor New Zealand to Japan

Converts New Zealand mains plug to suit Japanese, Mexico, Taiwan and parts of South America. Does not convert voltage.
M7315

$14.92

5

KORJO

Travel Adaptor New Zealand to South Africa/India

Converts New Zealand mains plug to fit South African powerpoints. Also suitable for use in India. Does not convert voltage.
M7317

$14.92

The Convenience of Travel Adaptors

Your Step-by-Step Guide

For appliances used overseas:

1 Select your destination country from the table.
2 Match the number following the country with a plug adaptor shown below.
3 Check the letter following the country against the voltage table to see whether you will need a step-up transformer.

For foreign appliances to be used here:

1 Check the voltage rating of your appliance to determine whether you will need a step-down transformer to run it from 230 volt.
2 If the appliance is rated for 230 volt operation, the M7302 reverse adaptor will adapt most foreign plugs to Australasian outlets.

Voltage

A = 115V (110 -130) B = 230V (220 -240) C = BOTH

Afghanistan	2	B
Algeria	4	C
Argentina	1	B
Australia*		
Austria	1	B
Bahamas	4	C
Bali (Indo.)	1	B
Bangladesh	2	B
Belgium	1	B
Brazil	1	C
Bulgaria	1	B
Burma	2	B
Canada	3,4	A
Chile	1,4	B
China*	1,4	B
Colombia	4	A
Cuba	4	A
Cyprus	1	B
Czech Rep.	1	B
Denmark	1	B
Egypt	1	B
Ethiopia	1	B
Fiji*		
Finland	1	B
France	1	C
Germany	1	B
Great Britain	2	B
Greece	1	B
Hong Kong	1,2	B
Hungary	1	B
India	1,2,5	B

Indonesia	1	C
Iraq	1,2	B
Iran	1,2	B
Ireland	2	B
Israel	1	B
Italy	1	B
Japan	4	A
Jordan	1	B
Kenya	2	B
Korea	2,4	C
Kuwait	2	B
Lebanon	1	B
Libya	2	B
Liechtenstein	1	B
Luxembourg	1	B
Malaysia	1,2	B
Malta	1,2	B
Mexico	4	A
Monaco	1	C
Morocco	1	C
N. Caledonia	1	B
N. Guinea*		
Nepal	2	B
Netherlands	1	B
Nigeria	2	B
Norway	1	B
Oman	1	B
Pakistan	2	B
Paraguay	1	B
Peru	1,4	C
Philippines	4	C

Poland	1	B
Portugal	1	B
Romania	1	B
Russia	1	B
Saudi Arabia	1	B
Scotland	2	B
Singapore	2	B
Slovakia	1	B
South Africa	5	B
Spain	1	C
Swaziland	2	B
Sweden	1	B
Switzerland	1	B
Syria	1	B
Tahiti	1,4	C
Taiwan	4,	C
Thailand	1,3,4	B
Tonga*		
Trinidad	1,2,4	C
Turkey	1	B
USA	3,4	A
Uganda	2	B
Vietnam	1	C
W. Indies	4	A
Wales	2	B
Yemen	2	B
Yugoslavia	1	B
Zaire	2	B
Zambia	1,2	B
Zimbabwe	1,2	B

*Uses New Zealand Mains Plug configuration

DSE

12V Travel Cooler/ Warmer

Compact lightweight fridge/ warmer unit keeps food and drinks cold or warm from a 12 volt power supply. Ideal for travel, picnics or the beach.
M4500

$48.94

DSE

12V/240V 15L Mobile Cooler

Mobile cooler and warmer with 15 litre capacity and can run off either a cigarette lighter or mains power. M4502

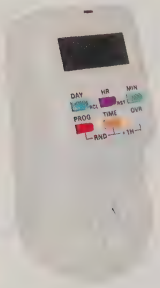
$98

elto

24 Hour Mains Timer

Ideal for home security and energy saving applications.
M9479

$14.77



elto

Digital Timer

For indoor use only, this time switch is not weatherproof. The rechargeable battery in the time switch should be charged first by plugging the time switch into a regular household power point(240V). Then switch the power on and leave for a few minutes.
M7227

$14.86

HPM

7 Day / 24hr Digital Timer

For The HPM timer has the combined features of a 7 day timer and 24hr timer. It gives you the most options for switching appliances "ON" and "OFF" automatically.
M7372

$29.86

intaract

RCD Safety Switch with Surge

230-240V, 10 amp. Surge protection of 4500 amps.
M7266

$24.81

HPM

Residual Current Device Safety Switch & Cord

Attach this to your electrical tools to prevent electrocution by cutting off your power and ensuring the power stays off until you press the restart button. A blue button indicates when the unit has tripped on an earth fault. With 1.6-metre lead.
M7294

$48.67

DSE

Timer Replacement Pins 10pk

Suits most timers. Pack of 10 (five grey and five white).
M6201

Limited stock.

$0.90

GENERAL PURPOSE AC/AC TRANSFORMERS

12 - 30V @ 60VA

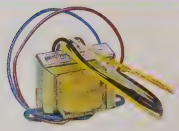
Secondary Output: 0-12-15-17.5 20-24-27.5 & 0-30V, Secondary Current: 2A, Dimensions:66(h) x 79(w) x 69(d)mm, Terminations: Solder Lugs. M1991

$33.48

9V CT @ 1.4VA

Secondary Output:4.5-0-4.5V, Secondary Current: 150mA, Dimensions:31(h) x 37(w) x 32(d)mm, Terminations: Flying Leads. M2840

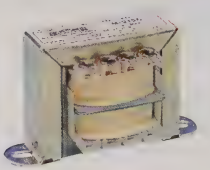
$10.48



30V CT/15V CT @ 15VA

Secondary Output:15-7.5-0-7.5-15V, Secondary Current: 500mA, Dimensions: 50(h) x 61(w) x 45(d)mm, Terminations: Flying Leads. M2860

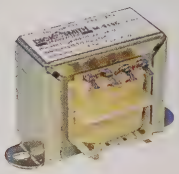
$19.93



6.3 - 15V @ 15VA

Secondary Output: 0-6.3-7.5-8.5-9.5-12.6-15V, Secondary Current: 1A, Dimensions: 50(h) x 61(w) x 53(d)mm, Terminations: Solder Lugs. M2155

$8



6.3 - 15V @ 30VA

Secondary Output: 0-6.3-7.5-8.5-9.5-12.6 & 15V, Secondary Current: 2A, Dimensions: 60(h) x 70(w) x 68(d)mm, Terminations: Solder Lugs. M2156

$23.33

0-24V @ 3A, 72VA

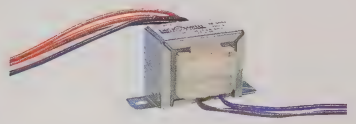
M2158

$27.93

18V @ 120VA

Secondary Output: 18V, Secondary Current: 6A Dimensions: 80(h) x 96(w) x 74(d)mm, Terminations: Flying Leads. M2000

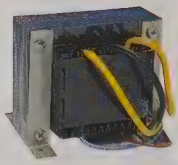
$59.93



30V CT/36V CT @ 5VA

tSecondary Output:18-15-0-15-18V, Secondary Output: 140mA, Dimensions: 35(h) x 43(w) x 42(d)mm, Terminations: Flying Leads. M2856

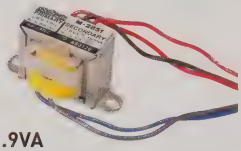
$5



56V CT @ 120VA

Secondary Output:28-0-28V, Secondary Current: 2A, Dimensions: 80(h) x 96(w) x 74(d)mm, Terminations: Flying Leads. M0144

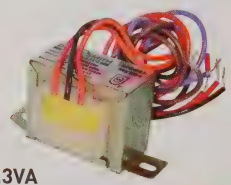
$59.93



12.6V CT @ 1.9VA

Secondary Output:6.3-0-6.3V, Secondary Current: 150mA, Dimensions:35(h) x 43(w) x 36(d)mm, Terminations: Flying Leads. M2851

$11.44



6.3-06.3V @ 500mA, 6.3VA

M2853

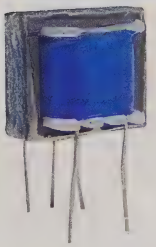
$12

12 - 30V @ 30VA

Secondary Output: 0-12-15-17.5-20-24-27.5-30V, Secondary Current: 1A, Dimensions: 60(h) x 70(w) x 68(d)mm. Terminations: Solder Lugs. M6672

$26.93

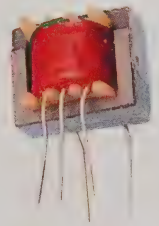
AUDIO AND TRIGGER TRANSFORMERS



Transformer 3K Ohm/3K Ohm CT Blue

Suitable for transistor radio replacements, transistor projects and oscillator circuits requiring coupling transformers. M0222

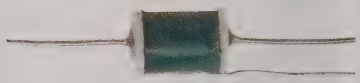
$4.88



Audio Transformer 1K CT: 8 Ohm

Primary:1K ohm, Secondary:8 ohm, Use: 350mW Output Coupling, Construction: Iron Core, Size: 11(h) x 15(w) x 14(d)mm . M0216

$4.22



Trigger Transformer

This 240V/6kV transformer suits Xenon Flashtubes P-8164. M0104

$1

DSE

Step-Down Transformer 240 - 600VA

This new plastic encased low profile Toroidal step-down transformer provides power for appliances where the load doesn't exceed 600 watts (5.4 Amps).
Converts Australasian 230-240V mains voltage to 110-115V American or Japanese voltage for appliances with a maximum output rating of 600VA (5.4 Amps).
Features:

- Converts 230-240 volt mains voltage to 110-115V to suit high output rated US/Japanese equipment that can operate from a 50Hz mains supply.
- Suitable for audio, computer or other equipment up to 600 watts (5.4 Amps)
- Re-settable thermal overload helps protect transformer from excessive loads
- Input connection via IEC socket with EMI filter
- 6.3A user replaceable input fuse to protect against short circuits or overload (spare fuse provided in holder)
- Isolation transformer for safety
- Non-slip rubber feet
- Low profile plastic enclosure
- Toroidal transformer with very low no-load loss
- Output with a recessed 3 pin US socket
- Class II construction with continuous earthing
- Manufactured to AS/NZS61558 Safety Standards.

M9760

$247

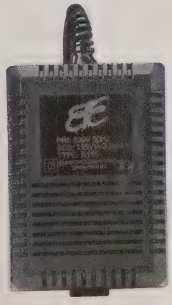
Step-Down Transformer 240-115V 100VA

This step-down transformer provides power for appliances where the load doesn't exceed 100 watts (0.9 Amps).
Converts Australasian 230-240V mains voltage to 110-115V American or Japanese voltage for appliances with a maximum output rating of 100VA (0.9 Amps).
Features:

- Converts 230-240 volt mains voltage to 110-115V to suit low output rated US/Japanese equipment that can operate from a 50Hz mains supply.
- Suitable for audio, computer or other equipment up to 100 watts (0.9 Amps)
- Re-settable thermal overload helps protect transformer from excessive loads
- 2A user replaceable output panel fuse to protect against short circuits or overload
- Isolation transformer for safety
- Non-slip rubber feet
- Robust metal enclosure
- Output with a 3 pin US socket
- Class 1 construction with continuous earthing
- Manufactured to AS/NZS61558 Safety Standards.

M1149

$127



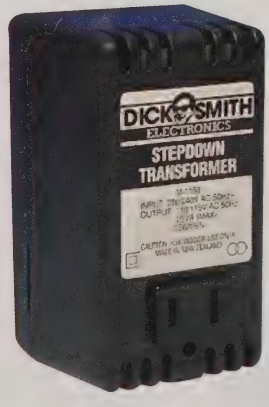
Step-Down Transformer 240-115V 50VA

This step-down transformer provides power for small appliances where the load doesn't exceed 50 watts (0.42 Amps).
Converts Australasian 230-240V mains voltage to 110-115V American or Japanese voltage for appliances with a maximum output rating of 50VA (0.45 Amps).
Features:

- Input with Australasian mains plug cord-set
- Output with a 3 pin US socket
- Inline unit - US power-packs can be 'piggy backed'
- Self resetting thermal overload protection
- Isolation transformer for safety
- Manufactured to AS/NZS61558 Safety Standards.

M1159

$99.93



DSE

Step-Down Transformer 240V-115V

Use to run small overseas devices in NZ.
25W maximum load.

M1155

$38.67

Step-Down Transformer 240-115V 1000VA

This step-down transformer provides power for large appliances where the load doesn't exceed 1000 watts (9 Amps).

Features:

- Converts 230-240 volt mains voltage to 110-115V to suit high output rated US/Japanese equipment that can operate from a 50Hz mains supply.
- Suitable for tools, homeware, audio, computer or other equipment up to 1000 watts (9 Amps)
- 10A re-settable thermal breaker protects against short circuits or overload
- Isolation transformer for safety
- Output with 2 x 3 pin US sockets
- Class I construction with continuous earthing

M1154

$398

Step-Down Transformer 240-115V 300A

This step-down transformer provides power for appliances where the load doesn't exceed 300 watts (2.7 Amps).

Features:

- Converts 230-240 volt mains voltage to 110-115V to suit medium output rated US/Japanese equipment that can operate from a 50Hz mains supply.
- Suitable for audio, computer or other equipment up to 300 watts (2.7 Amps)
- 3A user replaceable output panel fuse to protect against short circuits or overload
- Isolation transformer for safety
- Output with a 3 pin US socket
- Class 1 construction with continuous earthing
- Manufactured to AS/NZS61558 Safety Standards.

M1161

$157

Step-up Transformer Adaptor 50VA

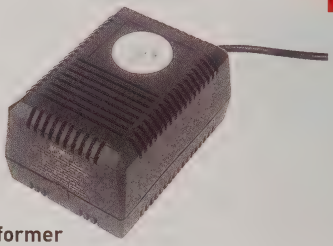
Run your NZ/Australian 230V/240V AC Appliances over in the United States and other countries that have 110-115V mains voltage. Only suitable to 50VA (0.2 Amps).

Features:

- Input side with 2 pin US mains plug cord-set; 110-115V 60Hz input
- Output with NZ/Aust 3 pin socket
- 230-240V output for Australasian appliances
- Rated at 50VA (0.2 Amps) MAXIMUM
- Self resetting thermal overload protection (NOT an isolation transformer)
- NOT for use in NZ or Australia.

M1181

$79.93



Step-up Transformer Adaptor 100VA

Run your NZ/Australian 230V/240V AC Appliances over in the United States and other countries that have 110-115V mains voltage. Only suitable to 100VA (0.4 Amps).

Features:

- Input side with 2 pin US mains plug cord-set
- 110-115V 60Hz input; output with NZ/Aust 3 pin socket
- 230-240V output for Australasian appliances
- Rated at 100VA (0.4 Amps) MAXIMUM
- Self resetting thermal overload protection
- (NOT an isolation transformer)
- NOT for use in NZ or Australia.

M1182

$127

DSE

Stepdown Transformer 240-115V AC 25VA

This step-down transformer provides power for small appliances such as small battery chargers and radios where the load doesn't exceed 25 watts (0.2 Amps).

Converts Australasian 230-240V mains voltage to 110-115V American or Japanese voltage for small appliances with a maximum output rating of 25VA (0.2 Amps).

Features:

- Input with Australasian mains plug cord-set
- Output with a 3 pin US socket
- Inline unit - US power-packs can be 'piggy backed'
- Self resetting thermal overload protection
- Isolation transformer for safety
- Manufactured to AS/NZS61558 Safety Standards.

M1160

$64.36

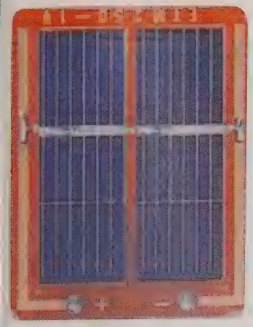
Wholesale Division

For bulk pricing and delivery to your door, contact our experienced customer service team

DICK SMITH ELECTRONICS

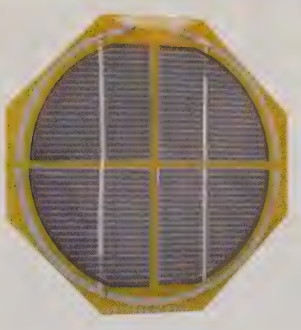
0800 373 347

Direct Sales

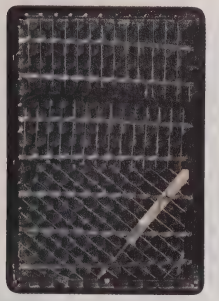


Solar Module 1.0V 250mA
New solar modules feature tough coatings and weather protection for those rough and hot applications.
02013
$8.44

Solar Module 1.5V 500mA
New solar modules feature tough coatings and weather protection for those rough and hot applications.
02015
$15.80

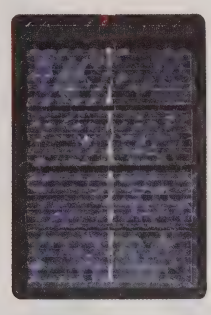


Solar Module 2.0V 500mA
New solar modules feature tough coatings and weather protection for those rough and hot applications.
02017
$18.44



Solar Module 0.45V 1A
Used individually or interconnected for increased voltage (series) or current (parallel).
02001
$11.33

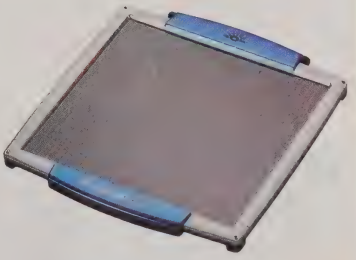
Solar Module 0.45V 400mA
Used individually or interconnected for increased voltage (series) or current (parallel).
02000
Limited stock.
$3



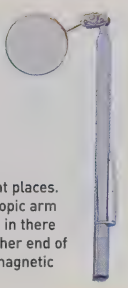
Solar Module 2.0V 200mA
Used individually or interconnected for increased voltage (series) or current (parallel).
02011
$11.33

ICP Charge Controller 7A 12V
Monitor your solar system's performance with ICP's charge controllers and prevents any 12 volt battery from overcharging.
03330
$58

ICP BatterySaver SE 2W Solar Panel
Using the sun energy, this solar powered maintainer will replenish your 12V battery by sending a constant maintenance level charge to the battery of your car, light truck, van, or SUV. So you will never be caught with a dead car battery again!
03307
$78



ICP BatterySaver SE 6W Solar Panel
The ICP BatterSaver SE slowly charges larger 12V deep-cycle batteries, protecting them through long storage periods.
03308
$178



Mirror & Pick-Up Tool
Great when you're working in tight places. The inspection mirror with telescopic arm and swivel head allows you to get in there and see what's happening. The other end of the telescopic arm doubles as a magnetic pick-up tool.
T4525
$9.93

DSE
PCB Work Station
Sturdy alligator clips hold your project still while you work on it. Includes handy magnifying glass.
T5715
$12.44

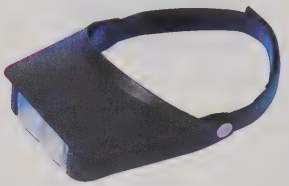
Round Magnifying Glass
A handy 63mm diameter magnifying glass with 2.5x magnification and a quality glass lens. Great for checking values on small components such as resistors.
T4590
$10.22

Adjustable Magnifier & Stand
The perfect way to magnify items when you need both hands free. Consists of a large 87mm magnifying glass attached to a flexible gooseneck. Includes heavy die-cast metal base.
T4592
$29.06

Multi-Angle Metal Vice
Beautifully crafted metal vice suitable for a variety of hobby uses. It mounts to a bench up to 50mm thick, has jaws with rubber covers 75mm wide that open apart up to 55mm. Made from diecast aluminium alloy.
T4742
$53.33

High Quality 3" Swivel Vice
A very high-quality mini vice that can be bolted or suction-fixed to the benchtop. It's made from high-quality cast alloy and has steel jaws with removable rubber pads. The ingenious swivel action allows you to mount it in almost any position.
T4745
$62.88

Apollo LED Headlamp
Ideal for biking, camping, fishing, hiking, reading and more.
T6342
$29.93

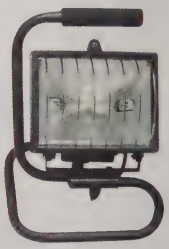


Visor Magnifier
Saves you from squinting while leaving both hands free to work on the job at hand. Slips on your head – flip it down for a magnified view: 2.2x and 3.3x.
T4593
$19.96

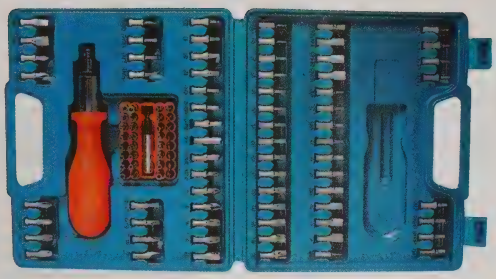
DSE
Personal Visor Magnifier
Consists of a lightweight visor that simply slips onto your head. The comfortable headband is fully adjustable to fit any size. Great for working with small components and circuit boards.
T4598
$34.94

DSE
Safety Glasses
The DSE Safety Glasses are lightweight, flexible plastic with ventilated to prevent fogging. Ideal for use in home or auto repair.
T5725
$6.88

ARLEC
Heavy Duty Work Light WL17
Heavy duty worklight for workshop and on site use. High impact resistant casing with hang hook and spring clip. Runs from 240V mains with a 3 metre cord and on/off switch on handle.
T4917
$14.88



elto
Portable Halogen Light
The elto Portable Halogen Light is perfect for the task that needs extra light. This 500 watt light will brighten up any location whether it be indoors or outdoors.
M9473
$14.98



101-Piece Bit Set with Carry Case

Includes a hard plastic carry case, driver, handle and magnetised bit holder. Comes with 14 different types of bit.

T4513

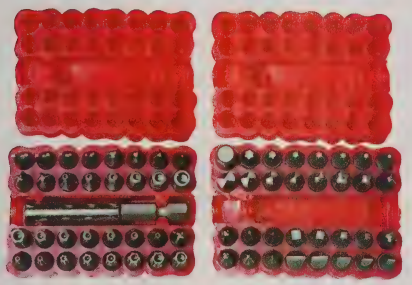
$22.94

10-Piece Bit Set & Right Angle Driver

Durable and great value. Supplied with 10 bits. Includes flat, Philips, Torx, and Pozidrive bits.

T4507

$10.92



64-Piece Bit Set With Magnetic Bit Holder

Includes a magnetic bit holder and a selection of bits: security torx, tri-wing, hex, spanner, torx, slotted, pozi-drive, square, Philips, clutch and hex to square adaptor.

T4501

$16.96

32-Piece Super Hard Security Bits

These security bits are made with an S2 grade high strength steel alloy (Chrome/Vanadium/Molybdenum), and have an HRC (hardness) rating of 58-62 degrees.

T4514

$14.96

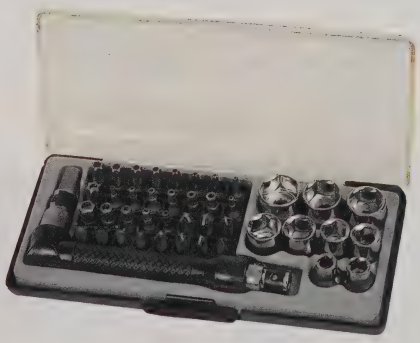
10-Piece Bit Set And Flexible Shaft

Featuring a range of 10 quality bits, with a flexible shaft to reach places others can't.

T4508

Limited stock.

$9.96



Security Bit & Hex Nut Socket Set

32 security bits, 9 hex sockets and a right angle driver handle in a storage box.

T4511

$19.84

SCREWDRIVERS

Flat Blade Screwdriver with Pocket Clip
Flat Blade Screwdriver 3mm x 75mm.
T6302
$4.22

PHILIPS
Screwdriver #0
Phillips Screwdriver #0 3mm x 75mm.
T6314
$5.14

DSE
6 Piece Screwdriver Set
Contains 3 Phillips and 3 flathead screwdrivers. Chrome vanadium steel.
T6321

$6.98

DSE
21 Piece Screwdriver & Bit Set
Kit includes 3 Slotted, 2 Phillips, 1 Electrician's and 1 Bit Holder Screwdrivers. T6323
$9.98

DSE
19 Piece Screwdriver Set
Kit includes 7 Slotted, 5 Phillips, 1 Electricians and a Set of 6 Jeweller's Screwdrivers. T6325

$14.78

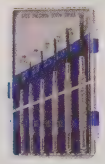
DSE 3.6V Cordless Screwdriver
3.6 Volt cordless rechargeable screwdriver with adjustable angle - straight or pistol grip. Supplied with chrome vanadium CRV bits.
T4831
$14.86

STANLEY
DynaGrip Ratchet Screwdriver
Quality screwdriver, Rubberised grip handle. Clockwise/ Anti-clockwise/Fixed State ratchet. Bit set holder incorporated with the screwdriver. Includes 10 bits and holder.
T4382

$27.66

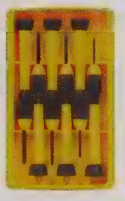
Eye Glass Repair Kit
Helps repair/adjust specs frames.
T4596
$5.48

MINIATURE SCREWDRIVERS



Precision Screwdrivers
A well-made set with both Philips and flat-head screwdrivers. Each has a free-running top and they're presented in a handy plastic storage box. T4360
$2.56

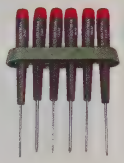
STANLEY
Precision Screwdriver Set
Has rubber grip handle with swivel top for ease of use as well as several flat and Philips blades each with a hardened tempered shaft.
T4381



$9.88

15 Piece Screwdriver Set
A handy collection of small screwdrivers for the electronics enthusiast. Complete with plastic storage case.
T4370
$15.98

6 Piece Electronics Screwdriver Set with Stand
Six screwdrivers and a handy stand. The set comprises 140mm extra-fine screwdrivers with free-running heads and specially-hardened tips for years of service.
T3510

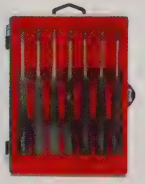


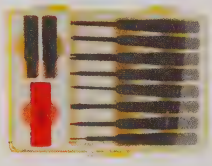
$13.98

SPECIALISED SCREWDRIVERS

Torx Screwdriver Set
A handy set of 3 small Torx screw-drivers with swivel-headed caps, and tough nickel chrome molybdenum steel shafts plus black oxided tips for greater durability. Sizes T6, T8, T10.
T6138
$9.98

Torx 7 Piece Screwdriver Set
A set of 7 Torx screwdrivers with strong 50mm alloy shafts and black oxided tips, all in a convenient plastic storage case. Sizes T6, T7, T8, T9, T10, T15, T20. T6140
$19.98

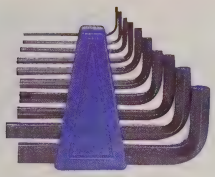




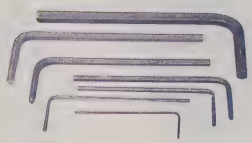
Mobile Phone Tool Kit
Screwdriver set for mobile phone repairs. Includes security screwdrivers to open up most mobile phones.
T0098
$11.88

DSE
6 Piece Insulated Screwdriver Set
Set of ergonomic handled screwdrivers (2 Philips, 4 slotted), insulated to 1000V. Comes in aluminium framed storage case. T6327
$21.66

ALLEN KEYS AND SPANNERS



10 Piece Allen Key Set
Comes complete with plastic clip to keep Allen keys organised. Contains 1.5mm, 2mm, 2.5mm, 3mm, 4mm, 5mm, 5.5mm, 6mm, 8mm 10mm Allen keys.
T3545
$4.94



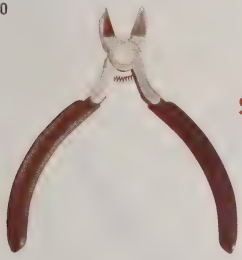
Allen Key Set
Set of seven Allen keys in sizes 0.89mm, 1.27mm, 1.5mm, 2mm, 2.5mm, 3mm and 4mm. Made in Japan for use on Japanese equipment.
T5080
$9.92

10 Piece Mini Spanner Set
Quality metric spanner set suitable for light and medium duty use. Sizes included are 4x4.5mm, 4.5x4mm, 6x5.5mm, 5.5x5mm, 7x6mm, 8x7mm, 9x8mm, 10x9mm, 11x10mm
T4550
Limited stock.
$10

100mm Shifting Spanner
For those small and tricky jobs, use this mini 100mm shifting spanner. Easy to carry in your top pocket, this solid metal shifting spanner has a comfortable plastic-dipped handle.
T3304
Limited stock.
$5

PLIERS

115mm Diagonal Nippers
T3330



$5.93

130mm Long Nose Pliers
T3331

$5.93

Stainless Steel Mini 90mm Diagonal Nipper
A precision stainless-steel nipper for working with small components and general printed circuit boards. Features quality stainless-steel construction, are spring loaded, and have well-insulated handles.
T3310
$9.97

DSE

5 Piece Plier/Cutter Set
A bargain-priced set of spring-loaded, polished steel pliers and nippers with insulated handles.
T3580
$14.98

DSE

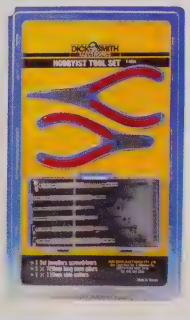
5pc Micro-Precision Plier Set
A superbly built set of spring-loaded micro pliers/nippers with fully insulated handles. Made from quality stainless steel and come with; 90mm cutting nippers, 100mm flat nose, 100mm round nose, 100mm bent nose and 100mm long nose pliers. T3575

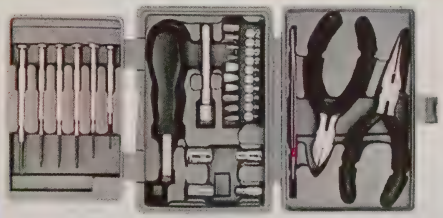
$38

TOOL SETS

DSE

8 Piece Hobby Tool Kit
Bargain priced, this kit comes with 6 jeweller's screwdrivers (0.9, 1.2, 1.8, 2.4, 3 & 3.2mm flat head), quality 120mm long-nose pliers and 110mm side-cutters. The pliers are hardened and tempered with insulated handles. T3294
$7.98





DSE

25 Piece Tool Set
Includes screwdrivers, pliers, tweezers plus bits and sockets with drivers. T5118
$9.98

DICK SMITH ELECTRONICS That's where you go!

COMPUTER TOOLS

DSE Anti-Static Wrist Strap

A must for installing expansion cards, memory, drives, changing ICs, Etc. Helps prevent stray static charges which can destroy ICs in an instant.
XH8050

$19.23

16 Piece Computer Servicing Tool Kit

Includes cutter, pliers, hexdriver, screwdrivers, torx bits, and more in a case. T4843

$29.98

27 Piece Computer Servicing Tool Kit

27 piece tool kit in a zip-up carry case. Ideal for a service person or the electronics enthusiast.
T4852
Limited stock.

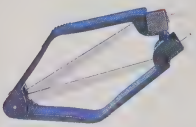
$79.98

IC Extraction Tool

Works with all DIL ICs and ensures no bent pins and no static damaging. Operates like a pair of hooked tweezers.
T4650

$3

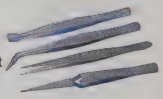
PLCC Extractor



For removing plastic-leaded chips and upgrading computer processors.
T4655

$11.94

Universal Tweezer Set



Great value! Four different 110mm tweezers in one pack. With fine-point blades, flat blades, curved blades and even reverse action (Squeeze to release).
T4625

$9.94

WIRE STRIPPERS

Economy Wire Strippers

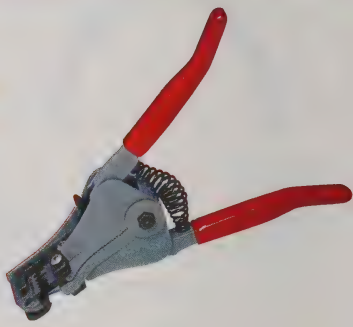
Bargain priced wire strippers with large adjustable range. Hardened jaws for strength and durability.
T3630

$7.66

Adjustable Wire Stripper

With self-adjusting mechanism that allows stripping of PVC insulation from 0.5mm to 6mm in size without damaging the conductor. The stripping length is adjustable from approx. 3mm to 25mm, and manual adjustment is available. With in-built cable cutter.
T3622

$22.94

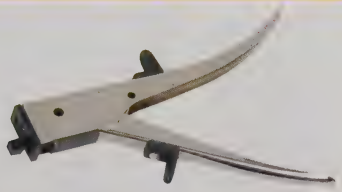


Deluxe Wire Strippers

A completely automatic wire stripper - one action is all it takes. Allows you to strip wires from 1mm to 3.2mm in diameter.
T3620

$28.38

MISCELLANEOUS TOOLS



Nibbling Tool

Allows you to cut almost any shape or size of hole in sheet steel to 0.6mm thick or light alloy to 1.5mm thick. It follows curved or straight lines with ease and is also great for many plastics.
T4945

$19.44

Tapered Reamer

The perfect tool for shaping and enlarging holes in thin metals, plastics and wood. Great for chassis bashers - gives you exact-sized holes. Tapers from 4mm to 20mm and is made from high-quality treated steel. Made in Japan.
T4920

$19.44

COAXIAL CAPABLE TOOLS

DSE IDC Punch Down Tool
Lightweight and easy to use wire pressing tool.
T3634

$19.87

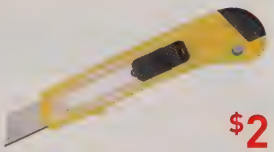
Rotary Coax Cable Stripper
This tool will strip both the outer jacket and inner insulation of coax in one easy operation. Suits common RG58/59/62 and RG6 cables. Comes with allen key for blade depth adjustment.
T3640

$25.88

Ratchet Coaxial Crimping Tool
Perfect for F, BNC, TNC, N, Teflon, Thinnet PVC and Fibre-Optic Connectors. Has an accurate ratchet drive and double jaws for single-action crimping.
T3537

$48.22

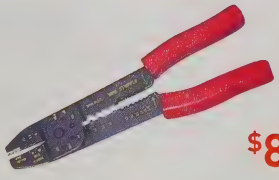
Utility Knife
You'll never have to put up with blunt blades again. This handy knife contains a snap-off replaceable blade and comes with a safety blade lock plus a comfortably-sized grip for accurate work.
T3615



$2

LUG CRIMPERS

Crimping Tool
Economical lightweight crimper for stripping various wire sizes from 0.75mm to 6mm, as well as crimp your cable quickly and reliably.
T3525



$8.94

Lug Crimping Tool
A handy tool when you're working with non-insulated terminals. Has strong metal jaws and cable cutter, plus handles 10-28AWG wire.
T3528

$12.96

Professional Lug Crimping Tool
This robust lug crimper has a ratchet drive for accurate control, variable pressure adjustment and double jaws for single action crimping. Suits a wide variety of common lugs.
T3535

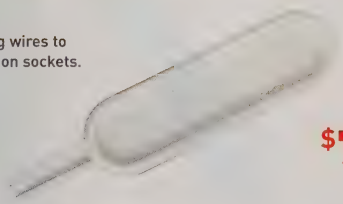
$49.94

Digitor Crimper and Terminal Kit
150 Piece Terminal Kit and Economy Crimper in a see through plastic box.
H5061

$19.93

PHONE AND ETHERNET CRIMPERS

Insert Tool
For easily attaching wires to your phone extension sockets.
F9024

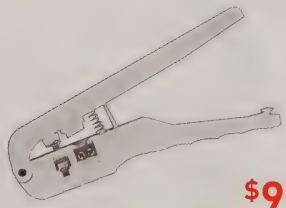


$7.26

BT Phone Crimping Tool
Attaches line plug to telephone cable.
F9025

$19.86

Phone Line Crimping Tool
Cuts, strips and crimps modular style telephone line cords. Suits 4-pin and 6-pin modular plugs.
T2591



$9.94

6/8 Pin Modular Crimping Tool
Cuts and strips cables, and crimps various 6pin and 8pin modular connectors. Rugged metal construction for accurate crimping.
T2920

$49.94

SOLDERING IRONS

The Easy Way To Solder

For projects and repair jobs, properly soldered connections are a must. But, if you're just starting out in electronics, a little friendly advice will help you get it all together.

1 Make sure the surfaces to be soldered are clean. A little dirt or grease (even from just handling components with your bare hands) will make it just that much harder for the solder to attach itself to the connection being soldered. A small file, sandpaper or a wire brush can be very useful for removing this. When soldering electronic equipment, you should always use resin-cored solder (see page 24 for solder).

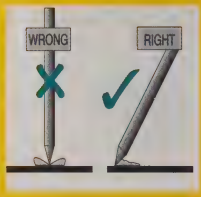
2 Before you use a new soldering iron for the first time, heat the iron, then coat the tip with solder to prevent oxides from forming, then immediately brush off the excess with a soft, damp cloth to form a smooth, silvery soldering surface.

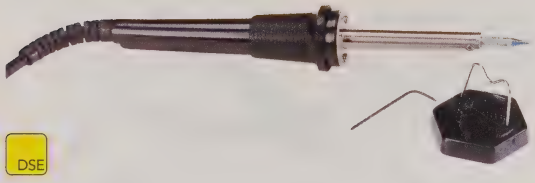
This is called "tinning" and should be done periodically to ensure efficient soldering.

3 Apply the tapered surface of the iron's tip to the connection, then apply solder (see illustration). Don't use the iron's tip to directly melt solder – let the connection melt it for you. Otherwise you may create a "cold" solder joint – one that is likely to fail later.

4 When solder begins to flow, carefully remove solder and then lift the iron's tip away from the job while keeping the connection stable.

5 When soldering delicate components, work quickly and use a heatsink (T2620) to draw off damaging heat.





DSE

25 Watt Soldering Iron

Easy to use soldering iron with lightweight handle and replaceable tip. Extremely efficient 240V operation with 370ºC temperature.
T2304

$19.63

DSE

40 Watt Soldering Iron

Easy-to-use and efficient 40W soldering iron. With 240 Volt operation, 370C operating temperature, long-life replaceable tip and lightweight handle. Includes mini-stand.
T2307

$24.97

DSE

Safety 17W Soldering Iron

Fitted with a non-burn style mains cable, this special version 17W soldering iron is well suited for users such as schools and colleges where safety and ease of use are of prime concern.
T2302

$26.56

DSE

12V 20-40 Watt Soldering Iron

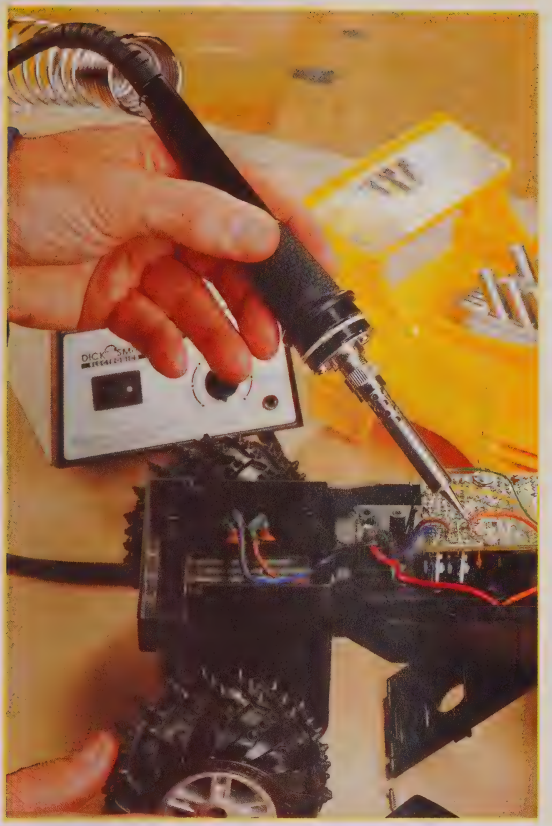
The ideal iron for on-site service and repairs, it's rated at 12V 20-40 watts and is both fast to heat and fast to recover. Comes with interchangeable long-life tip, 2 metre power lead and large insulated battery clips.
T2100

$19.87

GOOT 40W Soldering Iron

Lightweight, extremely durable, and highly reliable soldering iron rated at 40 watt. Ideal for general purpose soldering. Comes with non burn lead.
T1815

$38.47



Adjustable Temperature Soldering Station

Variable temperature control from approx. 250C to 450C. Lightweight soldering pencil with heat-resistant cable.

T1976

$87.63

DSE

Temperature Controlled Solder Station

150 - 450 degrees celsius variable temperature control. Lightweight soldering pencil with heat resistant silicone rubber cable for greater safety. Includes iron holder, cleaning sponge and medium chisel tip.

T2200

$127

DSE

Digital Display Solder Station

Lightweight 60W soldering pencil fitted with a highly flexible burn-resistant silicone rubber-sheathed cord.

T2250

$148

BUTANE SOLDERING IRONS

DSE **PRO-IRODA PRO-50 Solder pro 50W**
Cordless, simple and safe to operate. Equivalent to a power range of 30 - 70 Watt. Ready to use 20 seconds after ignition.
T1102
$45.58

DSE **Iroda SolderPro 70 Butane Soldering Iron**
Cordless, simple and safe to operate. Equivalent to a power range of 25 - 80 Watt. Ready to use 20 seconds after ignition. T1104
$49.88

DSE **PRO-IRODA PRO-50K Solderpro**
Cordless, simple and safe to operate. Equivalent to a power range of 30 - 70 Watt. Ready to use 20 seconds after ignition. Includes hot knife, heat blower, blow torch, solder & cleaning sponge.
T1103
$79.74

DSE **PRO-IRODA PRO-70K Solderpro Kit**
Cordless, simple and safe to operate. Equivalent to a power range of 25 - 80 Watt. Ready to use 20 seconds after ignition. Includes hot knife, heat blower, blow torch, solder & cleaning sponge.
T1105
$98.98

BLOW TORCHES

RONSON
Butane Refill 90ml
International best selling brand. Ultra refined for maximum care and performance. Supplied with universal adaptors.
N1300
$6.93

RONSON
Butane Refill 250ml
International best selling brand. Ultra refined for maximum care and performance. Supplied with universal adaptors.
N1301
$9.93

DSE **Economy Pencil Butane Blowtorch**
Great for heatshrink, gold, silver, brazing or glass work. Powered by butane gas (not included).
T1380
$12.90

DSE **PRO-IRODA MJ-300ST Micro Jet**
Self-starting hand-sized micro butane torch.
T1100

$26.88 ea

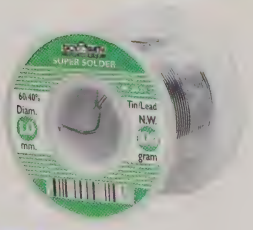
DSE **PRO-IRODA PT-200 Butane Torch**
An affordable tool for the workshop, lab, kitchen, garage, or wherever a reliable butane torch is required.
T1101

$49.94

Solder 0.56mm 100g Roll 60/40
General purpose electronics grade flux-cored 60/40 (tin/lead) solder suitable for most projects and repair work.
N2627 **$4.98**

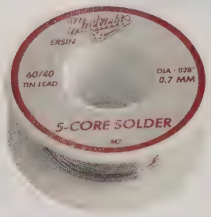
Solder 0.56mm 250g Roll 60/40
0.56mm
N2637 **$10.98**

Solder 0.80mm 100g Roll 60/40
0.80mm
N2628 **$4.98**



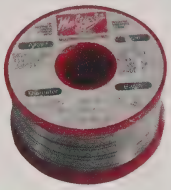
Solder 1.00mm 100g Roll 60/40
1.00mm
N2629 **$4.98**

Solder 1.00mm 250g Roll 60/40
1.00mm
N2639 **$10.98**



Solder Handy Roll 0.7mm (49g)
Multi purpose solder on a roll.
49g x 0.7mm.
N1705 **$9.93**

Solder Savbit 0.91mm (250g)
A slightly higher grade of solder that helps preserve the life of soldering tips and copper wires and tracks.
N1710 **$18.93**



Solder Savbit 1.20mm (250g)
A slightly higher grade of solder that helps preserve the life of soldering tips and copper wires and tracks.
N1709 **$18.93**

Solder Savbit 0.91mm (500g)
A slightly higher grade of solder that helps preserve the life of soldering tips and copper wires and tracks.
N1715 **$27.48**

Solder Savbit 1.20mm (500g)
A slightly higher grade of solder that helps preserve the life of soldering tips and copper wires and tracks.
N1714 **$27.48**

Solder Savbit 1.63mm (500g)
A slightly higher grade of solder that helps preserve the life of soldering tips and copper wires and tracks.
N1713 **$27.48**

Braid 1.5m x 0.8mm
A new No Clean Desoldering Wick designed for static-free desoldering and repair of PC boards without the need for subsequent cleaning.
N1826 **$5.73**

Goot Desoldering Wick 1.5mm x 2m
This is high quality desoldering wick with the braided copper wire saturated with special non chlorine flux. It can be used without fear of damaging precision machines and tools because it contains RMA equivalent flux.
N0200 **$6.44**

Goot Desoldering Wick 2.0mm x 2m
It can be used without fear of damaging precision machines and tools because it contains RMA equivalent flux.
N0201 **$6.48**

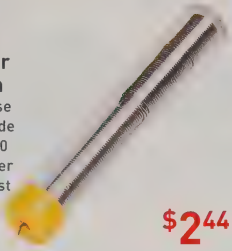
Goot Desoldering Wick 2.5mm x 2m
It can be used without fear of damaging precision machines and tools because it contains RMA equivalent flux.
N0202 **$6.48**

Goot Desoldering Wick 3.0mm x 2m
This is high quality desoldering wick with the braided copper wire saturated with special non chlorine flux.
N0203 **$6.48**

DSE

Flux-Cored 60/40 Solder Tube 0.8mm

General-purpose electronics grade flux-cored 60/40 (Tin/Lead) solder suitable for most projects and repair work.
N1639



$2.44

DSE

Flux-Cored 60/40 Solder Tube

General-purpose electronics grade flux-cored 60/40 (Tin/Lead) solder suitable for most projects and repair work.
N1637

$2.44

Soldering Iron Stand

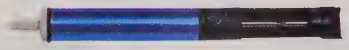
A budget, lightweight soldering iron stand which makes working with your soldering iron that little bit easier. Comes with sponge.
T1303

$10.22

Anti-Static De-Soldering Tool

With anti-static Teflon tip! Lightweight and easy to use, this medium sized tool allows one-hand operation while removing solder from electronic circuits etc. It's easy to clean with an anti-static Teflon tip and metal barrel.
T2567

$16.68



De-Soldering Tool

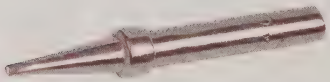
Ideal for reworking jobs and the removal of solder from electronic circuit components. Designed for easy one-hand use, its tip and barrel are fully removable for easy cleaning.
T2561

$9.98

DSE Soldering Aid Set

This kit has the specialised tools you need for soldering. Includes a heat sink to protect your heat sensitive devices, knife and brush, scraper and hook and a fork and spike.
T2607

$9.88



Medium Chisel Tip

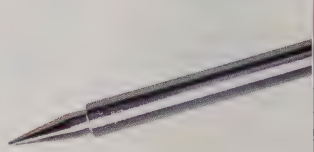
1.6mm diameter 1/16" tip to suit DSE Soldering station (T2000 / T2200). Medium Chisel Tip.
T2002

$11.36

Tip for T1815

Replacement 0.5mm conical Tip to suit Goot 40W Iron.
T2567

$9.66



Tip for TQ77

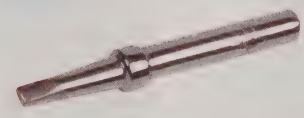
Replacement Conical Tip to Suit Goot TQ-77.
T1829

$14.93

Fine Conical Tip

0.8mm diameter 1/3" tip to suit DSE Soldering station (T2000 / T2200). Fine Conical Tip.
T2006

$11.37



Thick Chisel Tip

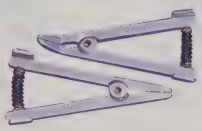
3.2mm diameter 1/8" tip to suit DSE Soldering station (T2000 / T2200). Thick Chisel Tip.
T2004

$11.37

Pin Vice

A quality pin vice complete with 2 internal collars covering the 0 to 3.2mm diameter range. Ideal for where hand drilling of delicate PCBs or cases is required. Drill bits not supplied.
T5115

$9.70



Heatsink Clip Set

Spring loaded, plier grip clips for heat sensitive components and leads. Made of aluminium for high thermal conductivity, 2 types (one straight, one angled), both are 75mm long.
T2620

$11.43

Bostik

Hot Melt Glue Gun

Fast and easy to use. Great for crafts and repairs. After warm-up just squeeze the trigger to apply glue. Glue sticks included.
T1417

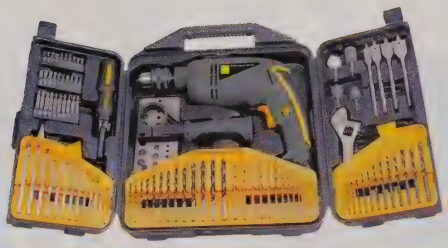
$19.88

DSE

13mm Impact Drill

Variable speed 13mm impact drill. Includes 6 drill bits and plastic carry case.
T4980

$16.96

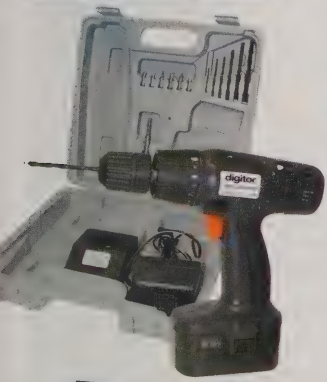


DSE

13mm Impact Drill Set

Variable speed 13mm impact drill with 131 Accessories including drill bits, driver bits, multi-bit screwdriver and crescent spanner.
T4981

$42.86



digitor

18V Cordless Drill

Features variable speed, 550rpm, reverse, lock off position, and 17 torque settings. Includes removable battery, 10mm keyless chuck and screwdriver bit.
T4818

$29.88

digitor

14.4V Cordless Drill Pack

Includes a powerful 14.4 Volt cordless drill, 2 batteries and a rechargeable torch,in a robust carry case.
T4816

$39.80

DSE

Jigsaw With Laser Guide

Laser guided jigsaw with saw guide, 3 blades and more.
T4982

$24.96

DSE

9 Piece Heat Gun Set

9 piece hot air gun set in convenient plastic carry case.
T4986

$34.88

DSE

Palm Sander

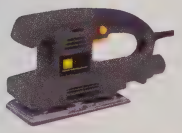
Palm sander with 6 sanding sheets and plastic carry case.
T4984

$14.98

DSE

Finishing Sander

180W finishing sander with dust extraction adaptor and sturdy plastic storage case.
T4983



$14.98

UNI-T Digital Multimeter UT20B

Covers ranges of AC voltage, DC voltage, DC current and resistance. Tests batteries (1.5V and 9V) and diodes.

Specifications

DC Voltage	200mV, 20V, 200V, 300V
AC Voltage	200mV, 200V, 300V
DC Current	2000uA, 20mA, 200mA
Resistance	200W, 2000W, 20kW, 200kW, 2000kW
Diode Test	Included
Battery Test	1.5V and 9V

Features

Diode test
Low battery warning
Battery test: 1.5V & 9V
Square wave output
High voltage warning

Q1469 **$11.94**

digitor

19 Range Digital Multimeter

Ideal as a first multimeter, this stylish, ergonomically designed unit is great for the home, boat or car. It features a rotary dial for range selection and a data hold button for added operating flexibility. This meter also includes options for testing diodes and transistor hFE.

Specifications

DC Voltage	200mV, 2000mV, 20V, 200V, 500V
AC Voltage	200V, 500V
DC Current	200uA, 2mA, 20mA, 200mA, 10mA
Resistance	200Ω, 2000Ω, 20KΩ, 200KΩ, 20MΩ
Diode Test	Included
Transistor Test	Measures hFE
Display	3.5 digit LCD display, 1999 count
Protection	300mA fused on mA input, 10A input unfused

Features

Data hold function
Low battery indicator
Transistor tester
Diode tester

Q1467 **$17.94**

DSE

Digital Palm Multimeter

Digital multimeter with data hold, backlight, stand, overmoulded rubber holster. Includes test leads and battery.

Specifications

DC Voltage	200mV, 2000mV, 20V, 200V, 500V
AC Voltage	200V, 500V
DC Current	200uA, 20mA, 200mA
Resistance	200Ω, 2000Ω, 20KΩ, 200KΩ, 20MΩ, 200MΩ
Continuity Beeper	Included
Diode Test	Included
Display	
Protection	

Features

Data hold function
Backlight
Diode tester
Continuity buzzer
Rubber holster

Q1459 **$38.88**

DSE

DSE 3.5 Digit Auto Backlight Digital Multimeter

A solidly built 3.5 digit Multimeter with Auto sensing backlit LCD screen, wide voltage and current measurement ranges, plus Frequency, Temperature and Capacitance measurements. Includes Test leads and K-type Temperature probe.

Specifications	
DC Voltage	200mV, 2V, 200V, 1000V
AC Voltage	2V, 20V, 200V, 750V
DC Current	20mA, 200mA, 20A
Resistance	200Ω, 2kΩ, 20kΩ
Capacitance	20nF, 200nF, 2uF, 100uF
Temperature	-40C to 0C, 0C to 400C, 400C to 1000C
Frequency	2kHz, 20kHz
Diode Test	Included

Features
- Auto sensing backlit LCD screen
- 3.5 digits (max display 1999)
- Data Hold and Sleep mode
- Stand
- Includes test leads and temperature probe

Q1458 **$59.88**

DSE

Auto-Ranging Digital Multimeter

Offering outstanding value for money, this meter packs a huge range of features into a stylish compact case. Auto-ranging for ease of use, it is capable of measuring voltage, current, resistance, capacitance, frequency, duty cycle and temperature, using the included K-type thermocouple probe. The perfect meter for schools, mobile technicians and the more advanced enthusiast.

Specifications	
DC Voltage	400mV, 4000mV, 40V, 400V, 600V
AC Voltage	400mV, 4000mV, 40V, 400V, 600V
DC Current	400uA, 4000uA, 40mA, 400mA, 10A
AC Current	400uA, 4000uA, 40mA, 400mA, 10A
Resistance	400Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ
Capacitance	4nF, 40nF, 400nF, 4µF, 40µF, 200µF
Temperature	-20°C to +1000°C
Frequency	9.999Hz, 99.99Hz, 999.9Hz, 9.999kHz, 99.99kHz
Duty Cycle	0.1% – 99.9%
Continuity Beeper	Included
Diode Test	Included
Transistor Test	measures hFE
Display	3.75 digit LCD display, 3999 count
Protection	500mA fuse on mA input, 10A fuse on 10A input

Features
- Autoranging
- Manual range override
- Data hold
- Continuity buzzer
- Battery tester
- Low battery indicator
- Auto power off
- Diode tester
- Transistor tester
- K-type thermocouple included

Q1456 **$69.88**

DSE

Auto-Ranging Digital Multimeter

A robust, accurate multimeter featuring a high degree of overload and user protection. The meter is specifically designed to withstand conditions normally encountered in electronic equipment, electrical appliances and overcurrent-protected, single phase, final subcircuits in residential and commercial installations.

Specifications	
DC Voltage	2V, 20V, 200V, 600V
AC Voltage	2V, 20V, 200V, 600V
DC Current	200µA, 2mA, 20mA, 200mA, 10A
AC Current	200µA, 2mA, 20mA, 200mA, 10A
Resistance	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ
Continuity Beeper	Included
Diode Test	Included
Display	3.75 digit LCD display, 1999 count
Protection	500mA fuse on mA input, 10A fuse on 10A input

Features
- CAT II 600V
- Max hold
- Data hold
- Continuity tester
- Auto polarity
- Low battery indicator
- Auto power off
- Diode tester
- K-type thermocouple included

Q1563 **$79.94**

digitor

26 Range Automotive Multimeter

For DIY car maintenance and RPM measurement of automotive engines with 2 to 8 cylinders (using the inductive clamp). Featuring 13 functions including auto ranging with manual ranging over-ride, large LCD with bargraph and function indicator as well as data and range hold. Comes complete with inductive clamp, rubber holster, test leads, test clips, temperature probe and 9V battery.

Specifications

DC Voltage	3.2mV, 3.2V, 32V, 1000V
AC Voltage	3.2V, 32V, 320V, 750V
DC Current	320µA, 3200mA, 32mA, 320mA, 10A
AC Current	320µA, 3200µA, 32mA, 320mA, 10A
Resistance	320Ω, 3.2kΩ, 32kΩ, 3.2mΩ, 32MΩ
Capacitance	4nF, 40nF, 400nF, 4uF, 4mF, 40mF
Temperature	-20.0 to 320°C, -20.0 to 750°C
Frequency	32Hz, 3200Hz, 32kHz
RPM (Tach) (RPM4)	600 - 3200, 6000 - 12000 (x10 RPM)
RPM (Tach) (RPM2/DIS)	300 - 3200, 3000 - 6000
% Duty Cycle	1.0% - 90.0%
Dwell Angle	0 - 180° (maximum varies with number of cylinders)
Continuity Beeper	Included
Diode Test	Included
Display	3.75/ 4.75 digit LCD, 4000/ 40000 count
Protection	500mA fuse on mA input, 10A fuse on A input

Features

Inductance clamp included
Temperature probe included
Analogue bargraph
Autoranging
Manual range over-ride
Data hold
Range hold
Continuity tester
Low Battery indicator
Diode tester
Protective rubber holster

Q1585 **$99.98**

DSE

Meterman Professional Digital Multimeter 5XP

27 ranges/10 functions - a complete performance, general purpose digital multimeter. Large easy to read display Cat III meter with min/max recording and data hold.

Specifications

DC Voltage	200mV, 2V, 20V, 200V, 1000V
AC Voltage	200mV, 2V, 20V, 200V, 750V
DC Current	200uA, 200mA, 20mA, 200mA
AC Current	20mA, 200mA, 20A
Resistance	200, 2k, 20k, 200k, 2M, 20M ohms
Battery Test	1.5V and 9V

Features

Non-Contact voltage detector
Large digit 2000 count display
Resistance
Continuity
Min/ max and date hold
Triple safety rated: CAT I 1000V, CAT II 600V, CAT III 300V

Q1786 **$114**

DSE

19 Range Digital Multimeter

A highly reliable multimeter that accurately measures inductance, resistance, capacitance, voltage, frequency, and duty cycle. Also tests logic, continuity, diodes, and transistors. Additionally it lets you know when your battery is running low, as well as providing overrange indication. Further features include a safety input warning buzzer and auto power off.

Specifications

DC Voltage	200mV, 2V, 20V, 200V, 1000V
AC Voltage	200mV, 2V, 20V, 200V, 750V
DC Current	20mA, 200mA, 20A
AC Current	20mA, 200mA, 20A
Resistance	200Ω, 2kΩ, 20kΩ, 200kΩ, 2mΩ, 20MΩ, 2000MΩ
Capacitance	2nF, 20nF, 200nF, 2µF, 200µF
Inductance	2mH, 20mH, 200mH, 2H, 20H
Frequency	Autoranging up to 20MHz
Duty Cycle	1.0% – 90.0%
Continuity Beeper	Included
Diode test	Included
Transistor test	measures hFE
Logic test	Included
Display	3.5 digit LCD, 1999 count
Protection	500mA fuse on mA input, 20A fuse on 20A input

Features

17 mm digit size
Input safety warning beeper
20A current range
Overrange indication
Auto polarity
Auto power off
Inductance measurement
Continuity tester
Low battery indicator
Transistor tester
Diode tester
Protective rubber holster

Q1559 **$147**

Meterman Digital Multimeter 30XR

Innovative, non-contact voltage detector safely indicates the presence of dangerous live voltage. Magne-Grip holster with magnetic hanging strap frees both hands for work. Safety rated at CAT II 600 V, CAT III 300 V, UL listed and OSHA compliant 9 ranges, 30 functions and handles most measurement needs. Battery/fuse door designed for easy accessibility. Includes heavy-duty test leads, manual, spare fuse and 9 V battery.

Specifications	
DC Voltage	200mV, 2V, 20V, 200V, 600V
AC Voltage	200mV, 2V, 20V, 200V, 600V
DC Current	200µA, 2mA, 20mA, 200mA, 10A
AC Current	200µA, 2mA, 20mA, 200mA, 10A
Resistance	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ
Continuity Beeper	Included
Diode Test	Included
Display	3.5 digit LCD display, 1999 count
Protection	250mA fuse on mA input, 10A fuse on A input

Features
- Cat III 300V
- Cat II 600V
- Non-Contact AC Voltage Indicator
- Battery Test
- Min/ Max Recording
- Data Hold
- Continuity Tester
- Low Battery Indicator
- Diode Tester
- Protective Rubber Holster supplied

Q1781 **$168**

DSE

AC/DC Digital Clamp Meter

Features 3999 count, bar graph display CAT III 1000V rating suitable for use with 240V mains measurements, data hold, max/min hold, zero relative, peak hold, safety test leads, safety input jacks, overload protection on all ranges, diode test, and continuity test.

Specifications	
DC Voltage	400mV, 4V, 40V, 400V, 1000V
AC Voltage	400mV, 4V, 40V, 400V, 750V
DC Current	400A, 1000A
AC Current	400A, 1000A
Resistance	400Ω, 4kΩ, 40kΩ, 400kΩ, 4000kΩ, 40MΩ
Capacitance	4nF, 40nF, 400nF, 4µF, 40µF
Continuity Beeper	Included
Diode Test	Included
Display	3.75 digit LCD, 4000 count

Features
- Cat III 1000V
- True RMS
- Min/Max Recording
- Peak Hold
- Data Hold
- Autoranging
- Manual Override
- Relative Zero Mode
- Analogue Bargraph
- Auto Polarity
- Auto Power Off
- Low Battery Indicator

Q1476 **$228**

FLUKE

Fluke 73 Series III Multimeter

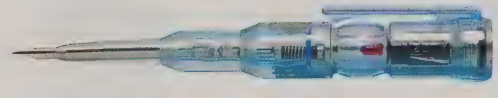
Default auto-ranging mode, AC/DC ranges to 600V and 10A, continuity beeper, diode test and analogue bargraph, rugged removable holster, rated to 600V Cat II.

Specifications	
DC Voltage	320.0mV, 3.200V, 32.00V, 320.0V, 600V
AC Voltage	3.200mV, 32.00V, 320.0V, 600V
DC Current	32.00mA, 320.0mA, 10.00A
AC Current	32.00mA, 320.0mA, 10.00A
Resistance	320Ω, 3200Ω, 32kΩ, 320kΩ, 3.2MΩ, 32MΩ
Continuity Beeper	Included
Diode Test	Included
Display	3200 count LCD display
Protection	630mA fuse on mA input, 11A fuse on A input

Features
- Cat II 600V
- Autoranging
- Manual Range Override
- Analogue Bargraph
- Touch Hold Mode
- Data Hold
- Continuity tester
- Low Battery Indicator
- Auto Power Off
- Diode Tester
- Protective Rubber Holster supplied

Q1703 **$377**

LIFETIME WARRANTY!



Voltage Tester With Screwdriver

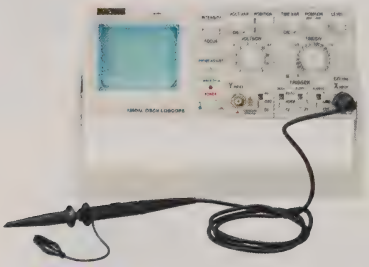
Great for checking switches, batteries, LEDs and more. Tests AC voltage.
Q545

$10.48

AC Voltage Finder

Now there's no need to put yourself at risk! This device comes with an insulated tip which detects the electromagnetic field surrounding cables, sensing any AC voltage ablve 120 volts and warns you with a flashing LED and an audible "buzz".
Q1531

$22.33

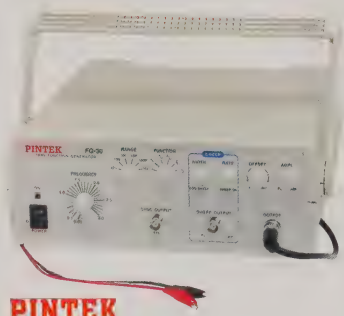


DSE

10MHZ 1 Channel Osilloscope

At last an economical and easily transportable Oscilloscope with bandwidth of up to 10MHz and sensitivity of 5mV/DIV to 5V/DIV. Easy to operate, it is an ideal scientific and engineering instrument for a wide range of uses including hobby and education.
Q1803
AVAILABLE LATE 2005

$198

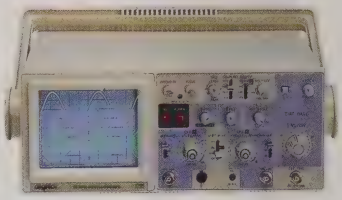


PINTEK

Bench Style Function Generator

The FG-30 is a multi-purpose, highly reliable and low cost 3 MHz sweep function generator. It's easy to use, and provides many convenient features which make it ideal for electronics, education, production and research and development laboratories.
Q1826

$298



digitor

Dual Trace, Dual Trigger 20MHz CRO

Affordable 20MHz oscilloscope suits a wide range of applications. Dual trace, dual trigger CRO with fully adjustable sweep time (in 20 steps), variable hold-off, fully adjustable sensitivity
and much more.
Q1802

$598

Logic Probe

A circuit-powered (4V-18V DC) logic probe that's ideal for troubleshooting and analysis of logic circuits. It's switch-selectable for TTL or CMOS circuits with adjustable threshold for each and has a maximum input signal frequency of 20MHz.
Q1274

$39.98

Universal CRO 100Mhz Probe

Universal probe with wandering earth lead and insulated shroud.
Q1249

$46.24

Universal CRO 60Mhz Probe

Universal probe with wandering earth lead and insulated shroud. Complete with a handy pouch.
Q1247

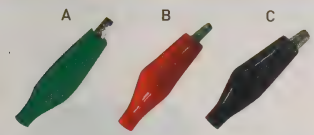
$32.78

ALLIGATOR CLIPS WITH BANANA SOCKET

A Red	P6408	$1
B Black	P6410	

Limited stock.

ALLIGATOR CLIP MINI INSULATED



A Red	P6400	
B Black	P6402	
C Green	P6403	$1.38

BATTERY CLIPS

A	P6416	Red Battery Clip 20A	$1.38
B	P6418	Black Battery Clip 20A	$1.38
C	P6420	Red Battery Car Clip 30A	$4.44
D	P6422	Black Battery Car Clip 30A	$4.44
E	P6424	Red Battery Car Clip 50A	$5.88
F	P6426	Black Battery Car Clip 50A	$5.88

TEST LEADS

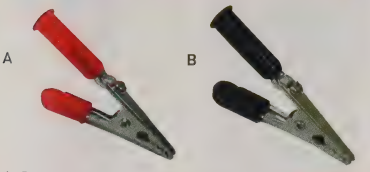
10 Piece Light Duty Jumper Kit

10 Piece, colour coded, jumper leads. Each lead has small insulated alligator clips on both ends. Q1900 **$9.93**

Self-Retracting Coiled Meter Lead Set

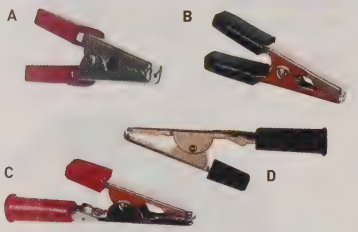
Saves the hassle of leads cluttering up the workbench. These coiled leads spring back into shape after they've been extended. Red and black with banana plugs. Q1916 **$10.94**

ALLIGATOR CLIPS WITH SCREW TERMINALS



A Red	P6411	$2.34
B Black	P6412	

CROCODILE CLIPS



A	P9919	Red Crocodile Clip - 34mm	$1.68
B	P9918	Black Crocodile Clip - 34mm	$1.68
C	P9924	Red Crocodile Clip - 60mm	$2.08
D	P9923	Black Crocodile Clip - 60mm	$2.08

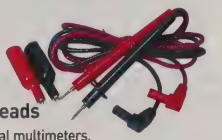
TEST CLIPS & PROBES

Long Red Solderless Test Probe

Use as replacement probes or for making your own leads. Solderless connection.
P1754 Red
P1755 Black **$3.94**

4 Piece Medium Duty Jumper Kit

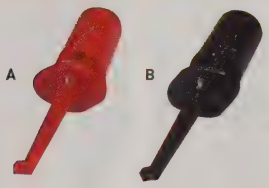
4 piece, colour coded, jumper leads. Each lead has medium sized insulated alligator clips on both ends. Q1902 **$9.93**



High-Quality Meter Test Leads

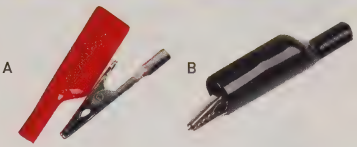
For the latest digital multimeters.
1.1 metre long cables with fully shrouded right angle banana plugs. The unique threaded test probe allows the included alligator clip adaptors to be firmly attached. Q1920 **$19.93**

TEST CLIPS AND PROBES (CONT'D)



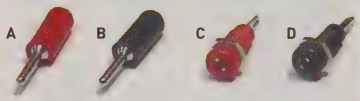
A	P6450	IC Test Clip - Miniature Red	$1.93
B	P6452	IC Test Clip - Miniature Black	$1.93

MEDIUM INSULATED



A Red	P6404	$1.68
B Black	P6406	

2MM MICRO CONNECTORS



A	P1750	Red Test Pin/Probe Plug 2mm	$1.23
B	P1752	Black Test Pin/Probe Plug 2mm	$1.23
C	P1758	Red Test Pin/Probe Socket Panel Mount	$1.93
D	P1759	Black Test Pin/Probe Socket Panel Mount	$1.93

Meter Test Leads

Suitable for most analogue multimeters and a large range of other test equipment, they're fitted with 90 degree banana plugs and standard probes. Q1913 **$9.98**

Meter Lead Set With Tip Plugs

900mm lead set fitted with standard 'tip' ends (100mm long probes and 20mm long points) and 1.5mm multimeter terminal points on the other. Q1910 **$8.28**

ARLEC

Multifunction Detector

Stud, metal, and voltage finder in one! Scanning technology accurately detects and located metal, A/C voltage cables and wooden studs and joists 20mm behind plywood and plaster board walls.

T1993

$34.94

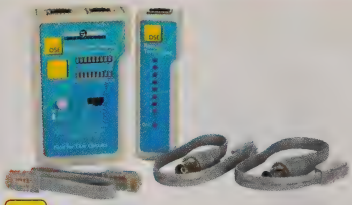
Meterman Non Contact Voltage Detector VT201

Non-contact voltage tester with a 70 - 440V AC range with audio and visual warning indicator. No need for electrical contact to confirm voltage exists.

Q1780

AVAILABLE LATE 2005

$49.98



DSE

LAN TEST Cable Tester

Identify cable faults, such as incorrect connection, open, short, crossover, and grounding test LED display, clear to read the result. Device Master and receiver can test the located and remote cable. Automatic and manual mode, so it is easier to test each cable short circuit, break circuit, cross, grounding condition etc.

Q1503

$49.94

DSE

Digital Callipers

4-digit LCD display, internal and external measuring blade, metric/imperial conversion and zero setting. Measurement range: 0-150mm; resolution 0.1mm

Q1381

$58.98

DSE

SonicTape Ultrasonic Tape

Instant measurement without the need for inconvenient tapes. Features a dynamic measurement capability and a measurement range from 0.6m to 15m.

Q1518

$39.94

DSE

SonicTape with Laser Pointer

Electronic tape measure with built in laser pointer. Features LCD display with a measurement range from 600mm - 15m.

Q1507 LIMITED STOCK

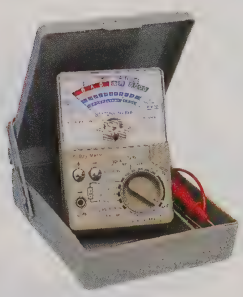
$69.92

Click Counter

A great low cost counter with 4 digits. Ideal for use by surveyors, schools and doormen at clubs. Unit counts up to 9999 & has a reset facility.

Q1330

$6.98



Battery Tester with Carry Case

Tests most size batteries. Save money and batteries with this compact and easy-to-use 15-range battery tester. In an instant you'll know whether a battery is fresh or flat. It's self-powered so it never needs batteries.

Q1001 LIMTED STOCK

$19.70

Resistance Substitution Wheel

Convenient and easy to use. Select values from 5 ohms to 1M ohm in 36 steps using the most common divisions. Comes complete with leads and insulated crocodile clips.

Q1410

$19.92

DSE

Digital Pocket Thermometer

Splashproof digital thermometer with minimum/maximum memory function and selectable Celsius or Fahrenheit readings. Stainless steel probe. Measurement range: -50 oC to 150 oC (-58oF to 302oF).
Q1452

$34.93

Deluxe Dual Input Thermometer

-200deg C to 1370deg C, supplied k-type theromocouple is 4ft teflon tape insulated to 260deg C. Features degrees C/F readings, auto power off, data hold and more. Compact, dual input, 4.5 digit LCD. Offers both Celsius and Fahrenheit readings. Features auto power off, data hold, dual temperature and temperature differential displays.
Q1437

$118

DSE

Pocket IR Thermometer

Measure temperature from a distance with this portable, compact unit. It features a Laser Marker to easily identify the subject when taking temperature measurements.
Q1449

NOT AVAILABLE IN ALL STORES

$177

DSE

Digital Lux/Fc Meter

3 digit LCD display with Lux, Fc, LOBAT, MAX and HOLD indicators. Measures from 0-50,000 Lux/Fc in four ranges with resolution 0.1 Lux/Fc.
Q1367

$58.94

Analogue Sound Level Meter

Monitor music or noise level with this sound level meter.
Q1461

$68.92

DSE

Digital Sound Level Meter

Provides automatic and manual ranging plus a digital bargraph. Suitable for accurate measurement of music or noise levels in a school, disco or auditorium.
Q1362

$179.94

DSE

Digital Water pH Meter and Case

Digital display and automatic temperature compensation. Ideal for laboratory use, ecology studies, photography, hydroponics, and aquariums. Comes with protective carry case and pH 7 buffer.
Q1416

$94

DSE

Pocket Air Speed/ Temperature Meter

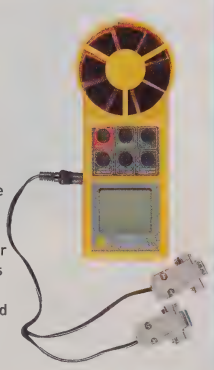
This water-resistant, compact unit is a high-quality digital air speed and temperature meter. Ideal for environmental experiments, boating, or sporting uses
Q1301

$128

DSE

Air Speed & Temperature Meter

A highly accurate air speed and temperature meter producing a easy-to-read digital temperature display in Celsius and Fahrenheit, air speed in metres per second, Kilometres per hour, Knots, Feet per minute and Miles per hour.
Q1302



$198

MU-45 type meters already adapted to suit almost any requirement with shunts and multipliers. With full scale accuracy better than or equal to 2.5%. All have mechanical zero adjustment. Nuts and washers supplied.

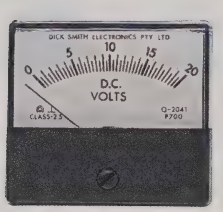
MU-45 Type Dimensions

Scale area:	55 x 30mm
Overall:	58 x 22mm
Mounting hole:	45mm
Bolt holes:	38mm centres x 3mm bore

0-5A Standard Panel Meter
Internal Resistance: 0.015 ohms
Q2031
$21.94

DSE

3.5 Digit LCD Panel Meter
With a 13mm display height, 200mV full scale input sensitivity and single 9V DC operation. Used for voltmeters, thermometers, current meter, capacitance meter, pH meter and more.
Q2220
$29.66

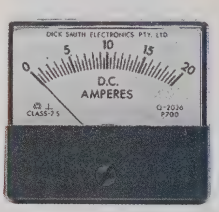


0-20V Standard Panel Meter
Internal Resistance: 1K ohm/volt
Q2041
$21.94

0-10A Standard Panel Meter
Internal Resistance: 0.008 ohms
Q2033
$21.94

Universal Meter MU-45 Type
Combined with our Shunt Pack, this versatile universal 100uA panel meter can be easily adapted for almost any scale variation of volts, amps, ohms, etc. Operates over the range 100uA - 316mA &1V - 100V.
Q2047
$21.94

0-30V Standard Panel Meter
Internal Resistance: 1K ohm/volt
Q2042
$21.94



0-20A Standard Panel Meter
Internal Resistance: 0.004 ohms
Q2036
$21.94

POWER SUPPLIES

DSE

0-30V 2.5 Amp Lab Power Supply with Digital Display
Reliable power supply with digital display for increased accuracy. Features 230-240V AC input, 0 to 30V DC output, and mains overcurrent protection.
Q1770
$247

DSE

LAB Power Supply
This solidly built laboratory grade linear power supply provides 0-30VDC adjustable output, with current up to 5 Amp continuous at all selectable output voltages. An adjustable current limit control (0-5A) is also provided.
Q1760
$347

DSE

3-15V 25 Amp DC Power Supply
This is ideal for those needing a low-noise regulated DC power source. DC output is from 3-15V and current is up to 25 amps at 15V (lower current at lower voltages).
D3800
Limited stock.
$358

AF

Laptop Clene Screen Wipes

Non-smearing, non-flammable, anti-static screen cleaning system for PDAs, laptops and notebooks. Suitable for use on TFT, LCD, plasma, Flat screens and panels.

N3122

$9.86

AF

Cleaning Kit

Contains 5 ultrclene wet/dry sachet pairs, keyboard cleaning card, 10 screenclean wet/dry sachet pairs, 3.5" cleaning diskette and a 20ml cleaning fluid.

N3105

$29.88

discwasher Digital

CD/DVD Lens Cleaner

Keeps your valuable CD and DVD equipment in peak condition.

C7142

$24.87

discwasher Digital

CD Repair Kit

A scratch remover for CDs! Helps eliminate irritating minor abrasions that can produce 'skipping'.

C7147

$39.87

DSE

Anti-Static Wet Wipes

This pack contains 100 soft, lint-free towelettes, which have been chemically treated so they are ideal for cleaning computer screens, keyboards, CDs, telephones etc.

N1242

$9.94

PHILIPS

CD Lens Cleaner AC300

Prevents skipping and read errors on all CD player types.

C7116

$29.87

PHILIPS

Audio Head Cleaner AC100

A 'drop-in' cleaning cassette that effectively cleans tape heads. It's the easy way to restore sound quality to your home and portable stereos.

C7098

$9.87

Procare CD/DVD Repairer PC7089

Professional repair for CDs, VCDs, DVDs, CD-ROMs and CDRWs. Easy 3 minute automatic restoration.

C7128

$49.87

Procare Replacement Pads/Fluid

Replacement pads and fluid for your PROCARE CD repairer.

C7129

$14.87

INSULATION TAPE

PVC Insulation Tape 18m Rolls

Hard-wearing coloured insulation tape. 19mm x 18m rolls. Five colours to choose from.
White N1358 **Blue** N1364 **Red** N1361
Green N1383 **Black** N1362

$1.93 ea

DSE

PVC Insulation Tape Pack

Hard wearing insulation tape, 19mm x 4.5m rolls in assorted colours. Pack consists of 2 x red, blue, green, white and yellow. 6 rolls per pack.
N2375

$3

CLOTH TAPE

DSE

Gaffer Tape Black 48mm x 20m

High tack adhesive, waterproof, leaves no gummy residue
N1395

$4.98

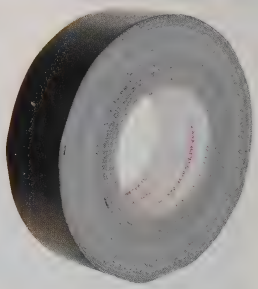
VELCRO

Cling

U.S Gaffa Tape Black 40m

Black polythene coated fabric tape with strong pressure sensitive adhesive. Sticks strongly yet is easily unwound and torn from the roll. 48mm wide.
N1431

$23.94



Waterproof Silver Cloth Tape - 10m roll

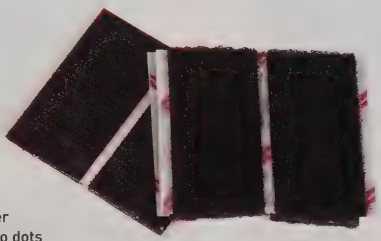
10m reels of all purpose waterproof cloth tape. Can be used for duct sealing, heavy duty packaging, sports protection etc.
N9408 Silver

$8.93 ea

Waterproof Black Cloth Tape - 10m roll

10m reels of all purpose waterproof cloth tape. Can be used for duct sealing, heavy duty packaging, sports protection etc.
N9398 Black
N9398 Black

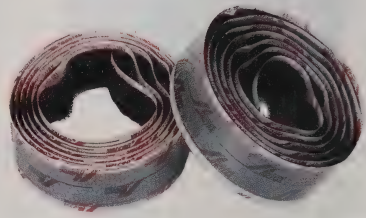
$8.93 ea



Heavy Duty Velcro (6pcs)

Designed for heavier objects, these Velcro dots are a non-permanent way of securing an object to a surface. Can be re-used. Black. 22 x 50mm.
N1454

$7.93



Velcro Sticky Back Strips - 2 x 1m

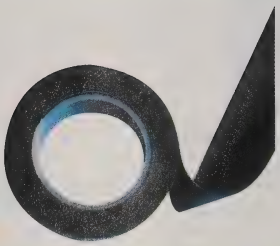
For those products that need to be secured to a surface, however from time to time you require removing the product from the surface and then re-securing on the surface. This is the ideal solution to your problem. 22mm wide.
N1450 Black

$14.93

SPECIAL TAPES

Amalgamating Tape
Great for sealing or where a tight application is required. 19mm wide by 2M long.
N1376

$9.93



Double Sided Indoor Tape
N1380 12mm x 2m roll

$5.93

N1384 24mm x 2m roll

$7.93

ADHESIVES

Holdfast Ultra Bonder Twin Pack
300g tubes of a high strength, top fast setting adhesive which can be used for virtually any type of fastening job.
N1406

$5.96

Holdfast 5 Minute Epoxy 24ml
Bonds glass, wood, china, plastics, metal, crafts. Dries clear and is paintable, drillable and sandable. Top quality, heat resistant, fast curing and super strong. Sets in five minutes and is water resistant.
N1403

$11.48

Holdfast Super Glue Fix It 3g Tube
Designed to stick rubber to steel, steel to wood and ceramic to steel. Easy application, no mess, no waste.
N1402

$3.88

Holdfast Ultra Bonder Easy Brush 5g
Comes in non-spill bottle and has easy brush control. Easy to spread. Suitable for china, rubber, metal, leather, paper, wood, plastic. Instant, clean and dries clear.
N1404

$8.77

Bostik Blu Tack
Bostik's unique formula seals, cleans and sticks. Hundreds of uses. Fasten posters to the wall, clean typewriter keys, secure machines to your deck, position charts etc. Press it on and roll it off. Four 220mm reusable strips per pack.
N1455

$2.94

Wholesale Division
For bulk pricing and delivery to your door, contact our experienced customer service team
DICK SMITH ELECTRONICS
0800 373 347
Direct Sales

Air Brush 300g

Dry multi-purpose cleaner for the safe removal of dust and lint from all delicate precision equipment. Safe to use, non corrosive, non flammable, leaves no residue or condensation.
300ml can.
N1238

$21.94

Freeze Spray

Multi-purpose dry coolant spray for maintenance trouble shooting and repair. Use it to isolate circuits or components while testing for heat-induced failures, to protect sensitive components during soldering. 300g can.
N1239

$21.94

Video Cleaner

Plastic-safe video cleaner is a technically proven, stable, inert high purity, cleaning solvent. Removes light contaminants, dust, lint and moisture from all video and audio heads. 150g can.
N1057

$19.94

Lectra Clean

A unique, scientifically formulated cleaner and degreaser that effectively removes moisture, grease, oil, wax, dirt and other contaminants from motors, parts and other electrical mechanical equipment. No flash point. No fire point. Test on small area before using. 400g can.
N1063

$19.93

Switch Clean/Lube

Specially formulated to provide the single operation of both cleaning and lubricating sensitive switches and contacts. Can dissolve and clean away oil, grease, dust and atmospheric contaminants, then evaporate to leave a thin protective lubricant. 300g can.
N1074

$19.93

CO Contact Cleaner

Technically proven, plastic-safe high purity cleaning solvent. Non-corrosive, non-staining, rapid-complete evaporation - contains no lubricants. Removes light contaminants, dust, atmospheric oils, finger prints, moisture from precision equipment where lower-flashpoint solvents may be used.
350g can.
N1072

$21.94

Contact 2000

Developed as a cost effective alternative to CFC 113. Safe on most plastics. Contains no lubricants, removes light contaminants, atmospheric oils, dust, lint and moisture from precision electrical electronic equipment. 200g can.
N1089

$29.93

2-26 Lubricant

Displaces moisture, seals out moisture, prevents corrosion, cleans, lubricates, penetrates; CRC 2.26 is a stable, inert organic formula, especially prepared to prevent and repair electric failures due to moisture, corrosion, dirt or friction. 300g can.
N1062

$14.94

CRC

5.56

Lubricates for smooth action, and silences annoying squeaks and squeals. Protects metals against corrosion and displaces moisture to help start wet engines. Penetrates, lubricates, displaces moisture, prevents corrosion. 400ml can.

N1066 **$9.93**

CRC

808 Silicone Spray

A concentrated formula that provides a thin, durable, odourless film that revives, lubricates, waterproofs and protects. Will not mark or stain and is ideal for use on all metal, plastic, rubber, fabric, wood and painted surfaces. 330g can

N1064 **$14.93**

CRC

Zone 240

CRC Zone 240 continuous vapour action saves money by extending product life and eliminating down-time due to corrosion. CRC Zone 240 forms a very thin film proven effective against aggressive environments, including industrial and marine. 400ml can.

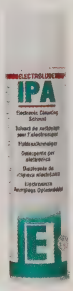
N1093 **$19**

DSE

Air Jet Spray

The Dick Smith Electronic Air Jet Spray is ideal for the removal of dust and lint from all electrical and electronic equipment. Ideal for use on computers, keyboards, hi-fi's or cameras. The Air Jet Spray leaves no residue or condensation. 250g can.

N1195 **$19.06**



ELECTROLUBE

Isopropanol Cleaning Solvent

Rapid drying 99% pure Isopropanol, it's safe to use on most plastics.

N1095 **$12.94**

ELECTROLUBE

Fluxclene

For removing contaminants and flux after soldering.

N1112 **$21.94**

ELECTROLUBE

Ultrasolve

Non-CFC Cleaning Solvent - 200ml Aerosol. Excellent for removing greases, oils flux residues from PCBs.

N1170 **$14.94**

ELECTROLUBE

Clear Protective Lacquer

A protective coating against salt, dust and moisture.

N1130 **$18.94**

BREADBOARDS

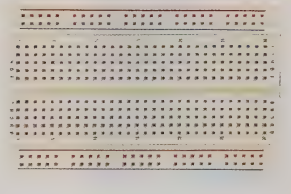
PCB Manufacture

As the Printed Circuit Board (PCB) is the basis of most electronic projects, enthusiasts have much to gain by developing the knowledge and skill needed to produce this primary component at an amateur level. A PCB consists of a layer of insulating material, with a pattern of thin metal foil, on one or both surfaces. The foil pattern becomes the interconnecting conductors in a electronic circuit. The foil pattern for the circuit can be formed by photographic or non-photographic methods.

In the non-photographic method, a protective coating, in the shape of the desired conductor pattern, is applied to the copper surface, usually by a screen printing process.

The remaining exposed copper is then chemically etched away.

To produce a circuit pattern by photographic means, a high contrast facsimile of the final foil conductor pattern is produced. This facsimile, or phototool as it is referred to, is placed over a blank board treated with a photosensitized etch resist. It is then exposed to ultra violet light. The board is then placed in a developer solution before the etching stage where the unwanted copper is removed leaving a copy or 'print' of the original artwork. This process is not unlike photographic printing techniques, hence the name, 'printed circuit'.



Small Breadboard

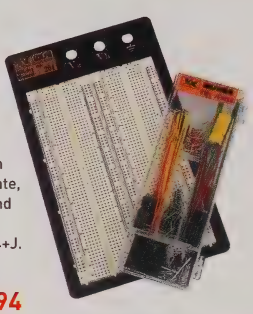
Small 300 hole bread board without baseplate. Clip onto other boards to increase size to meet your requirements. Model WBU301J.
H4035
$12.93

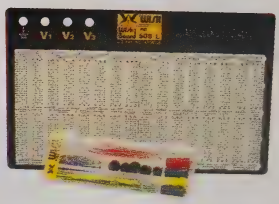
Medium Breadboard

640 hole, 8 distributed bus breadboard without baseplate. Clips on to other boards to make any size you require. Model WB102.
H4044
$19.94

Large Breadboard Kit

Small 800 hole breadboard with non slip baseplate, binding posts and jumpwires.
Model WBU-204+J.
H4040
$39.94

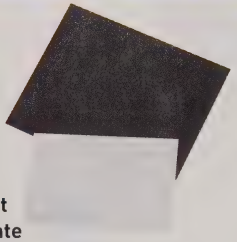




Basic Breadboard Set

Small, 300 hole breadboard with non slip baseplate, binding posts and jump wires.
Model WBU-502L+J.
H4020
$29.94

PCB MANUFACTURING



Positive Photo Resist PCB Laminate

Includes 2 PCB's. Sizes: 100 x 80mm & 80 x 50mm. Suitable to use with Technical Design PCB Kits.
N5985
$9.93

Ammonium Persulphate PCB Making Etchant

Special long-lasting compound for use when etching PCBs. 600g.
N5654
AVAILABLE LATE 2005
$14.94

ELECTROLUBE

Ferric Chloride Etchant Granules 250g

Sealed packet of ferric chloride hexahydrate crystals for etching copper clad boards.
N5653
$19.94

Printed Circuit Board Etch Kit

Everything you need for making PCBs. Instructions, PC resist pen, etchant and sample PCBs.
N5651
$34.94

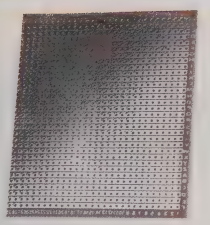
Direct Etch PCB Making Pen

The pen is filled with a lacquer ink which is impervious to aqueous PCB etch solutions. Ideal for touch-ups or direct etch boards.
N5181
$9.94

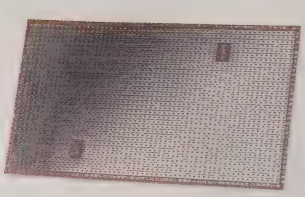
Blank Printed Circuit Boards Single Sided

300 x 300mm
H5550
$14.94

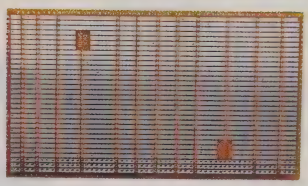
150 x 75mm
H5540
$3.94



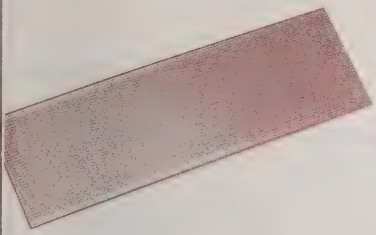
Versatile Strip Boards
Continuous pre-drilled stripping on a high-grade insulator. It's similar to the old English Veroboard. 2.54mm hole spacing.
H5614
$4.94



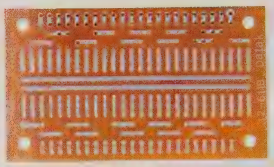
Versa Strip Board
Continuous pre-drilled stripping on a high-grade insulator. It's similar to the old English Veroboard. 2.54mm hole spacing.
H5612
$5.48



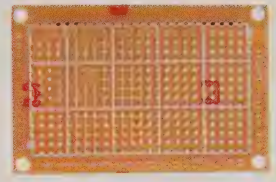
Printed Stripboard
The most versatile board! The alphanumeric grid facilitates positive pin identification. Each board has 2.54mm hole spacings. Size: 88 x 153mm.
H5616
$6.18



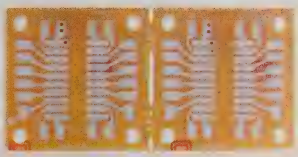
Versa Strip Boards
Continuous pre-drilled stripping on a high-grade insulator. It's similar to the old English Veroboard. 95 x 308mm
H5112
$8.94



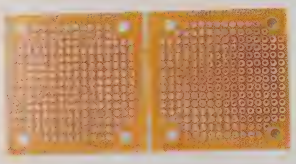
Small Prototype Board
This PCB allows for multiple IC connections with its 118 links available. Each board has 310 holes. 44mm (W) x 75mm (L).
H5604
$3.88



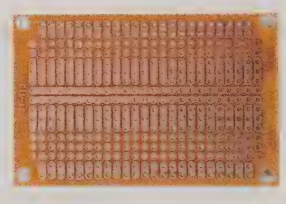
Small Prototype Board
Small and versitile PCB board with etched copper pads. Each board has 371 holes and is 47mm (W) x 72mm (L).
H5603
$3.88



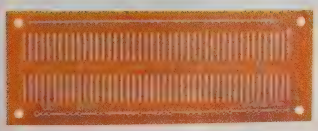
8 to 20 Pin Dual IC PCB Board
Dual PCB board, pre etched and drilled 8 to 20 pin wide.
H5601
$3.93



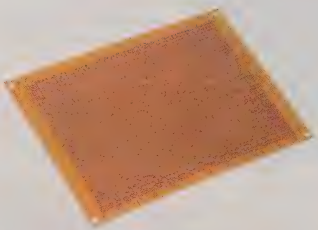
PCB Dual Prototype Board
This versitile twin board has etched copper pads. Use together or cut in half to give 2 identical PCBs. Each board has 371 holes and is 47mm (W) x 72mm (L).
H5607
$3.93



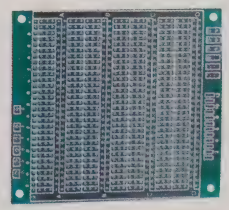
Medium Prototype Board
This PCB allows for multiple IC conections with its 98 links available. Each board has 417 holes and is 47mm (W) x 72mm (L).
H5608
$3.43



Medium Prototype Board
This PCB allows for multiple IC connections. Also has numeric numbering system to facilitate positive pin identification. Each board has 503 holes and is 49mm (W) x 131mm (L).
H5605
$3.93



Large Prototype Board
This versitile PCB has etched copper pads and has a numeric and alphanumeric system to give positive pin identification. Each board has 2,200 holes and is 115mm (W) x 160mm (L).
H5609
$5.98

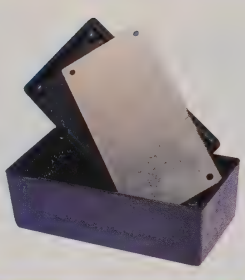


Fibreglass Prototype Board
Single-sided printed circuit board. Silk screened. 95 x 85mm, 948 holes.
H5613
$9.48

DICK SMITH ELECTRONICS That's where you go!

Zippy Boxes with Both Aluminium and Plastic Lids

Ideal for a wide range of applications, they're made from impact-resistant ABS plastic and have deep ribs which add to the strength and are ideal for mounting PCBs without screws.



Size(mm):	Cat No:	Price:
28 x 54 x 83	H2855	$3.54
41 x 68 x 130	H2853	$4.38
50 x 90 x 150	H2851	$4.94
60 x 113 x 196	H2852	$7.94

Black Project Boxes

Ideal for a wide range of applications. The lids have four mounting stand-offs to easily accommodate PCB's.

Size(mm):	Cat No:	Price:
48 x 95 x 37	H2840	$5.66
60 x 115 x 43	H2841	$6.88
75 x 135 x 49	H2842	$9.93
95 x 160 x 61	H2843	$11.33

PCB Slot Boxes With "Tractor Grip"

Made of strong grey ABS plastic, they come complete with case screws and 'tractor-grip' board supports that mesh with matching grooves on all four sides of the case's interior to ensure your PCB stays put!

Size(mm):	Cat No:	Price:
55 x 55 x 42	H2870	$3.12
75 x 50 x 27	H2872	$3.56
125 x 60 x 40	H2878	$4.12
145 x 85 x 50	H2880	$4.64
180 x 110 x 60	H2882	$7.62

Sealed Polycarbonate Box

Made from tough polycarbonate thermoplastic. Feature a a tongue and groove sealing system with a neoprene gasket and internal threaded brass inserts allow for easy mounting of PCBs or terminals.

Size(mm):	Cat No:	Price:
115 x 65 x 40	H2860	$8.98
82 x 80 x 55	H2869	$12.94
115 x 90 x 55	H2863	$13.74
171 x 121 x 55	H2864	$18.18
121 x 171 x 80	H2867	$21.98
146 x 222 x 55	H2865	$27.94

Sealed Diecast Aluminium Boxes

Ideal for outdoor projects that require both weatherproof and RF shielded enclosures, as well as in industrial and commercial applications. These boxes are made from corrosion-resistant diecast aluminium (ADC-10 to Japan Industrial Sandard) and feature a recessed neoprene gasket to meet IP65 and NEMA4 (dust and hoseproof) requirements. The wall mounting holes and stainless steel lid fixings are also outside the sealing area to prevent the ingress of moisture. Complete with copper-plated ground screw and washer.

Size(mm):	Cat No:	Price:
115 x 65 x 55	H2233	$20.24
115 x 90 x 55	H2234	$26.98
171 x 121 x 55	H2236	$39.94

Utility Junction Black Box

Ideal for many applications with square cable entries on each end.

Size(mm):	Cat No:	Price:
65 x 38 x 27	H2921	$2.84

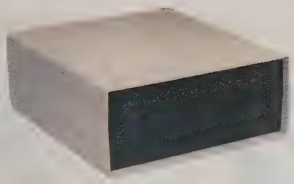
Wholesale Division

For bulk pricing and delivery to your door, contact our experienced customer service team

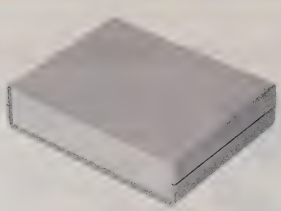
DICK SMITH ELECTRONICS

0800 373 347

Direct Sales

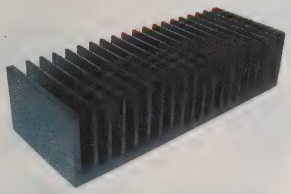


Plastic case - 155 x 65 x 160mm
Has 16 vertical mounting slots for 145mm long PCBs (up to 55mm high) and 23 mounting points for horizontal PCBs. Top and bottom halves screw together. Includes front and back panels and screws.
H2508 LIMITED STOCK
$6

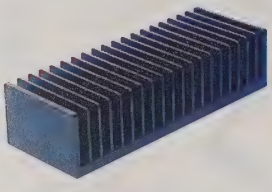


Instrument Case - 140 x 110 x 35mm
These high impact ABS plastic cases have a two part design with a tongue groove joint. They are lightly textured which affords a non-scratch surface and maintains a high quality finish. Features guide slots for vertical mounting of PCBs. H2512
$9.66

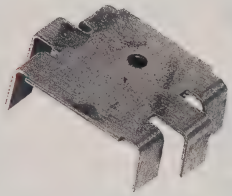
Plastic Case - 210 x 55 x 175mm
Just the right size and shape for a large range of instruments, communications equipment, etc. Has removable front and rear panels and provision for speaker at both top and bottom. Comes with assembly screws. H2520
$18



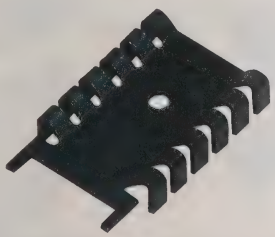
Heavy Duty Heatsink
200mm x 75mm
Ideal for power amplifier projects. Thermal Resistance: 0.59 degrees C/W.
H3406
$25.94



Heavy Duty Heatsink
300mm x 75mm
Ideal for power amplifier projects. Thermal Resistance: 0.40 degrees C/W.
H3408
$30.44



Clip On TO220 Heatsink
Excellent for retrofitting to existing designs for additional cooling. Lightweight design minimises stress on component. Thermal Resistance: 1.3 degrees C/W.
H3432
$1.64



Heavy Duty Heatsink
200mm x 75mm
Suit TO220, mounts vertically.
H3436 LIMITED STOCK
$0.90

DSE

25 Drawer Parts Cabinet
A 25-drawer plastic cabinet ideal for storage of components and hardware items. H4587
$15.93

DSE

Single Tray Toolbox
Single tray black and yellow toolbox.
370 x 185 x 130mm.
H4593
$11.94

Heat Transfer Compound
Non-silicon compound for reliable and efficient dissipation of heat. Should be applied to base and mounting studs of components, thermostats and heatsinks. 10ml/20gm syringe.
N1200
$7.48

Economy Heat Transfer Compound
Silicon-based compound for thermo coupling of electronic components and heatsinks. High-heat conductive property allows heat to pass freely where heat dissipation and dispersion is important. 10g tube. N1205
$5.54

TITAN

Thermal Grease 1.5g
High effect Thermal Grease, Silver Thermal Compound.
N1208
$5.88

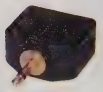
AUDIO/VIDEO ADAPTORS

2.5mm Mono Plug - 2 x 2.5mm Mono Sockets
P6644 **$3.94**

2.5mm Mono Plug - 3.5mm Stereo Socket
P6515 **$2.58**

2.5mm Stereo Plug - 2 x 2.5mm Stereo Sockets
P6642 **$3.94**

2.5mm Stereo Plug - 3.5mm Stereo Socket
P6517 **$2.58**


2.5mm Stereo Plug - 2 x 3.5mm Stereo Sockets
P6643 **$3.94**

3.5mm Mono Plug - 3.5mm Stereo Socket
P6600 **$2.58**

3.5mm Mono Plug - 2 x 3.5mm Stereo Sockets
P6527 **$3.94**

3.5mm Mono Plug - 6.5mm Mono Socket
P6510 **$2.58**

3.5mm Mono Plug - 6.5mm Stereo Socket
P6570 **$2.58**

3.5mm Stereo Plug - 2.5mm Mono Socket
P6641 **$2.58**

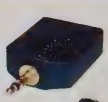
3.5mm Stereo Plug - 2 x 2.5mm Stereo Socket
P6640 **$3.94**

3.5mm Stereo Plug - R/angle 3.5mm Stereo Socket
P6620 **$2.58**

3.5mm Stereo Plug - 2 x 3.5mm Stereo Socket
P6525 **$3.94**

3.5mm Stereo Plug - 6.5mm Stereo Socket
P6505 **$2.58**

AUDIO/VIDEO ADAPTORS


3.5mm Stereo Plug - 2 x 6.5mm Stereo Sockets
P6638 **$3.94**

3.5mm Stereo Socket - 3.5mm Stereo Socket
P6602 **$2.58**

6.5mm Mono Plug - 3.5mm Mono Sockets
P6520 **$2.58**

6.5mm Mono Plug - 3.5mm Stereo Socket
P6502 **$2.58**

6.5mm Stereo Plug - 2 x 3.5mm Mono Sockets
P6639 **$3.94**

6.5mm Stereo Plug - 3.5mm Stereo Socket
P6500 **$2.58**

6.5mm Stereo Plug - R/angle 3.5mm S/Sockets
P6625 **$3.94**

6.5mm Stereo Plug - 2 x 3.5mm Stereo Socket
P6636 **$3.94**

6.5mm Stereo Plug - 2 x 6.5mm Stereo Socket
P6581 **$3.94**

6.5mm Stereo Socket - 6.5mm Stereo Socket
P6587 **$4.92**

3.5mm Mono Plug - RCA Socket
P6560 **$2.58**

3.5mm Stereo Plug - 2 x RCA Sockets
P6572 **$3.54**

6.5mm Mono Plug - RCA Socket
P6530 **$2.58**

6.5mm Stereo Plug - 2 x RCA Sockets
P6585 **$3.54**

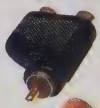
AUDIO/VIDEO ADAPTORS

RCA Plug - 3.5mm Mono Sockets
P6540 **$2.48**

RCA Plug - 6.5mm Mono Sockets
P6550 **$2.54**

RCA Plug - RCA Plug
P6614 **$3.28**

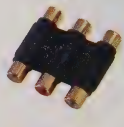
RCA Plug - 2 x RCA Plugs
P6610 **$3.94**


Gold RCA Plug - 2 x Gold RCA Sockets
P6612 **$8.94**

Gold RCA Plug - 2 x Gold R/angle Gold RCA Socket
P6635 **$6.94**

RCA Socket - RCA Socket
P6565 **$3.28**

2 x RCA Sockets - 2 x RCA Sockets
P6567 **$5.98**


3 x RCA Sockets - 3 x RCA Sockets
P6568 **$8.94**

RF ADAPTORS

BNC Socket - BNC Socket
P2265 **$5.54**

BNC Plug - 2 x BNC Sockets
P2277 **$6.68**

BNC Terminator 500hm
P2280 **$5.54**

BNC Plug - RCA Socket
P2250 **$5.54**

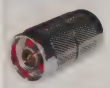
BNC Socket - RCA Plug
P2255 **$5.54**

RF ADAPTORS

BNC Plug - UHF SO239 Socket
P2230 **$4.44**

UHF PL259 Plug - BNC Socket
P2240 **$6.93**

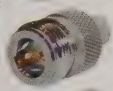
UHF SO239 Socket - UHF SO239 Socket
P2380 **$4.44**



N Plug - N Plug
P2424 **$3.94**

SMA plug - BNC Socket
P2460 **$5.98**

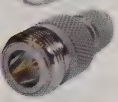
SMA plug - UHF SO239 Socket
P2464 **$5.98**



SMA plug - N Socket
P2462 **$4.98**

Mini UHF Plug - FME Plug
P2484 **$2.94**

Mini UHF Plug - UHF SO239 Socket
P2434 **$2.98**



Mini UHF Plug - N Socket
P2432 **$3.28**

TV ADAPTORS

Coaxial Cable Joiner Plug - Plug
P2041 **$1.94**

Coaxial Cable Joiner Skt - Skt
P2034 **$1.94**

Plastic Coaxial Cable Joiner
P2033 **$3.18**

Metal Coaxial Cable Joiner
P2029 **$6.48**

TV ADAPTORS

TV Coax Plug-F Socket
P2019 **$3.92**

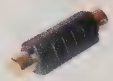
F Plug - TV Coax Socket
P2017 **$4.48**

F Socket - TV Coax Socket
P2025 **$2.98**

F Socket - F Socket
P2027 **$3.88**

3.5mm Mono Plug - TV Coax Socket
P2035 **$4.42**

RCA Plug S.-Video Socket
P1470 **$7.48**



S-Video Plug RCA Socket
P1471 **$7.48**

SCART Plug - 3 x RCA (Component Vid) Sockets
P6676 **$15.94**

SCART Plug - 3 x RCA + S-Video Sockets
P6675 **$19.88**

Adaptor - 2.1mm Plug - 2.5mm Socket
P6598 **$3.28**

Adaptor - 2.1mm Plug - R/angle 2.1mm Skt
P9200 **$2.68**

Adaptor - 2.5mm Plug - R/angle 2.5mm Skt
P9201 **$2.68**

SERIAL PORT ADAPTORS

9 Pin Sub D Male - 25 Pin Sub D Female
P9905 **$1**
Limited stock

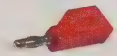
925 Pin Sub D Male - 9 Pin Sub D Female
X2660 **$9.87**

STANDARD BANANA PLUGS

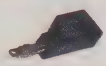
Red	P1710	**$1.04**
Black	P1712	**$1.04**
Yellow	P1714	**$1.04**
Green	P1716	**$1.04**

PIGGY BACK BANANA PLUGS

Red	P1740	**$1.78**
Black	P1741	**$1.78**
Yellow	P1742	**$1.78**
Green	P1743	**$1.78**



Red	P1711	**$2.78**



Black	P171 3	**$2.78**

Red	P1766	**$4.98**

Black	P1768	**$4.98**

STANDARD BANANA SOCKETS

Red	P1720	**$0.98**
Black	P1722	**$0.98**
Yellow	P1724	**$0.98**
Green	P1726	**$0.98**

BANANA SOCKETS WITH BINDING POSTS

Red	P1730	**$3.28**
Black	P1732	**$3.28**

BANANA SOCKETS WITH LARGE BINDING

Red	P1731	**$2.44**
Black	P1733	**$2.44**

2.5mm PHONE CONNECTORS

Mono Line Plug - Plastic
P1125
$0.78

Mono Line Socket - Plastic
P1232
$1.18

Mono Socket - Panel Mount
P1220
$0.98

Stereo Line Plug - Plastic
P1127
$1.18

Stereo Socket - Tubular Panel
P1222
$1.38

3.5mm PHONE CONNECTORS

Mono Line Plug - Plastic (Black)
P1134
$0.98

Mono Line Plug - Plastic (Red)
P1132
$0.84

Mono Line Plug - Right Angle Plastic
P9098
$0.98

Mono Line Socket - Plastic (Black)
P1236
$1.44

Mono Line Socket - Plastic (Red)
P1234
$1.44

Mono Socket - Panel Mount
P1231
$1.04

Stereo Line Plug - Plastic
P1140
$0.98

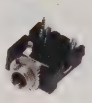
Stereo Line Plug - Right Angle Plastic
P9099
$1.44

Stereo Line Plug - Gold
P1147
$2.94

2.5mm PHONE CONNECTORS

Stereo Line Socket - Plastic
P1238
$1.54

Stereo Socket - Tubular Panel Mount
P1240
$1.64



Stereo Socket - PCB / Chassis Mount
P1245
$1.64

Stereo Socket - PCB Mount
P9124
$1.44

4 Conductor Line Plug - Plastic
P1148
$1.78

6.5mm PHONE CONNECTORS

Mono Line Plug - Plastic
P1160
$1.64

Mono Line Plug - Nickel
P1162
$2.44

Mono Line Plug - Right Angle Nickel
P1170
$2.44

Mono Line Socket - Plastic
P1264
$1.78

Mono Socket - Panel Mount SPST Switched
P1261
$1.68

Stereo Line Plug - Plastic
P1166
$0.98

Stereo Line Plug - Nickel
P1168
$2.44

Stereo Line Socket - Plastic
P1286
$1.58

Stereo Socket - Panel Mount, Common Ground
P1266
$2.43

6.5mm PHONE CONNECTORS

Stereo Socket - Panel Mount DPST Switched
P1298
$1.78

Stereo Socket - Panel Mount DPST Switched, Isolated Ground RCA Connectors
P1296 $1.98

RCA CONNECTORS

Line Plug - Plastic (Red)
P1420
$0.88

Line Plug - Plastic (White)
P1421
$0.88

Line Plug - Plastic (Black)
P1422
$0.88

Line Plug - Plastic (Yellow)
P1423
$0.88

Line Plug - Metal (Red)
P1424
$2.53

Line Plug - Metal (Black)
P1426
$2.53

Gold Line Plug - Red
P1425
$3.94

Gold Line Plug - Black
P1427
$3.94

Gold Line Plug with Interchangeable Colour Rings
P1438
$5.98

Deluxe Gold Line Plug with Interchangeable Colour Rings
P1439
$8.44

Line Socket - Plastic (Red)
P1410
$0.88

Line Socket - Plastic (Black)
P1412
$0.88

RCA CONNECTORS cont.

Gold Line Socket - Red
P1411
$5.54

Gold Line Socket - Black
P1413
$5.54

Panel Socket - Yellow
P1428
$0.94

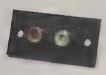
Panel Socket - Red
P1429
$0.94

Panel Socket - Black
P1430
$0.94

Gold Panel Socket - Red
P1431
$2.64

Gold Panel Socket - Black
P1432
$2.64

Panel Socket - Round Phenolic Insert
P1441
$1.66


Gold 2-Way Panel Socket - 22 x 56mm
P1450
$4.46

Gold 4-Way Panel Socket - 24.4 x 76mm
P1453
$3.48

Gold 6-Way Panel Socket - 50 x 48mm
P1454
$5.18

2 Pin Line Plug - Solder
P1520
$1.04

2 Pin Line Plug - Screw Type
P9140
$1.48

2 Pin Line Plug - Right Angle Screw Type
P1521
$1.28

RCA CONNECTORS cont.

2 Pin Panel Socket - Solder
P1523
$1.34

3 Pin Line Plug - Solder
P1530
$1.44

5 Pin Line Plug - 180° Solder Type
P1550
$2.23

5 Pin Line Socket - 180° Solder Type
P1554
$2.14

5 Pin Panel Socket - 180° Solder Type
P1552
$1.48

8 Pin Line Plug - Solder Type
P1571
$2.18

MINI DIN CONNECTORS

4-Pin SVHS / S-Video Line Plug
P1482
$2.38

4-Pin Gold SVHS / S-Video Line Plug
P1484
$3.28

6-Pin PS/2 Line Plug
P1492
$2.38

4-Pin SVHS / S-Video Panel Socket
P1500
$1.98

SPEAKER CONNECTORS

Monster™ Twist On Speaker Connectors (2 Pack)
P9250
$3

2-Way Rectangular Spring Terminals
P1764
$2.18

2-Way Round Spring Terminals
P1763
$3.34

4-Way Rectangular Spring Terminals
P1765
$3.34

BNC CONNECTORS

Line Plug - Solder type to suit RG58
P2210
$3.54

Line Plug - Crimp type to suit RG58
P2211
$3.34

Line Plug - Screw type to suit RG58
P2212
$4.92

Line Plug - Right Angle Solderless
P2213
$6.48

Panel Socket - Insulated Ground
P2215
$3.28

Panel Socket - Crimp type
P2217
$2.48

Panel Socket - Common Uninsulated Ground
P2220
$4.44

Line Socket - Solder type to suit RG58/59
P2223
$1.48

Line Socket - Screw type to suit RG58/59
P2225
$2.98

UHF CONNECTORS

PL259 Line Plug - Solder type to suit RG58/59
P2311
$4.48

PL259 Line Plug - Crimp type to suit RG58
P2313
$3.64

PL259 Line Plug - Screw type to suit RG58
P2315
$2.98

PL259 Line Plug - Solder type to suit RG8
P2310
$3.64

SO239 Panel Socket, Hole Mount
P2340
$2.98

TV COAX CONNECTORS (75 Ohm Belling-Lee)

P2018 Gold Line Plug Solderless **$5.92**

P2020 Line Plug Metal Solderless **$2.34**

P2028 Gold Line Socket Solderless **$5.92**

P2030 Line Socket Metal Solderless **$2.34**

P2046 Panel Socket Single Hole Mount **$2.48**

TV RIBBON CONNECTORS (300 Ohm)

P2084 Line Plug Screw Terminals, 3mm dia **$3.28**

F TYPE CONNECTORS

P2015 Plug F56 Connector Outdoor **$2.98**

P2016 Weather Boot For RF Connectors **$0.98**

P2090 F59 Line Plug Screw Type **$3.28**

P2092 F-Type Crimp Plug Grip Ring **$1.98**

P2094 F-Type Plug Twist On F59 **$1.98**

FME CONNECTORS

P2480 Line Plug - Crimp type **$2.48**

P2482 Line Socket - Crimp type **$2.48**

MINI UHF CONNECTORS

P2430 Line Plug - Crimp Type **$2.48**

N CONNECTORS

P2402 Line Plug Crimp type to suit RG58 **$2.98**

P2401 Silver Line Plug Solder type to suit RG58 **$5.93**

P2404 Line Plug Crimp type to suit RG213 **$2.98**

P2400 Silver Line Plug Solder type to suit RG213 **$7.93**

P2406 Line Socket Crimp type to suit RG58 **$4.78**

P2408 Line Socket Crimp type to suit RG213 **$4.78**

P2413 Silver Line Socket To suit RG213 **$4.98**

P2410 Silver Panel Socket **$6.23**

SMA CONNECTORS

P2450 Line Plug - Crimp Type **$2.98**

P2452 Line Plug - Screw On **$2.98**

P2454 Line Socket - Crimp Type **$2.98**

P2456 PCB Mount Socket **$2.98**

N CONNECTORS

P1820 2 Pin Plug - Panel Mount **$2.94**

P1832 2 Pin Socket - Line **$3.24**

P1824 4 Pin Plug - Panel Mount **$2.94**

P1834 4 Pin Socket - Line **$2.94**

P1826 8 Pin Plug - Panel Mount **$5.4**

P1836 8 Pin Socket - Line **$5.4**

XLR CONNECTORS

P1609 3 Pole Line Plug Plastic **$4.93**

P1623 3 Pole Line Plug Metal **$7.78**

P1607 3 Pole Line Plug Metal IDC **$8.94**

P1622 3 Pole Panel Plug Metal **$6.44**

P1612 3 Pole Line Socket Plastic **$6.18**

P1621 3 Pole Line Socket Metal **$7.78**

P1608 3 Pole Line Socket Metal IDC **$8.94**

P1611 3 Pole Panel Socket Plastic **$5.93**

P1626 3 Pole Panel Socket Metal **$9.93**

Wholesale Division
For bulk pricing and delivery to your door, contact our experienced customer service team
DICK SMITH ELECTRONICS
0800 373 347
Direct Sales

DC CONNECTORS

P1641 2.1mm Line Plug Short Shaft $2.18

P1642 2.1mm Line Plug Long Shaft $2.18

P1643 1.3mm Line Plug $2.18

P1645 2.5mm Line Plug Short Shaft $2.18

P1646 2.5mm Line Plug Long Shaft $2.18

P1648 2.1mm Panel Socket Round, Switched $2.58

P1650 2.5mm Panel Socket Round, Switched $2.68

P1653 2.1mm Line Socket $2.23

P1655 2.5mm Line Socket $2.48

P1657 1.3mm Panel Socket $2.28

P1661 2.1mm Panel Socket $0.98

P1666 2.5mm Panel Socket $1.04

P3105 2 Pin Line Plug Low Voltage, Non Polarised $2.10

P3106 2 Pin Line Socket Low Voltage, Non Polarised $2.10

CONNECTOR STRIPS

P4855 12 Way 300V 10A - Small $2.24

P4850 12 Way 300V 10A - Medium $2.98

P4848 12 Way 300V 10A - Large $3.98

TAG STRIPS

P4800 3 Lug Strip - Large $0.58

P4802 5 Lug Strip - Large $0.78

P4804 7 Lug Strip - Large $0.98

PCB MOUNT TERMINAL STRIPS

P4818 Term Block Screw PC Mnt 2-Way $1.27

P4824 Term Block Screw PC Mnt 3-Way $1.64

AUTOMOTIVE CONNECTORS

P2001 Car Radio Antenna Line Plug Solderless $2.48

P2002 Car Radio Antenna Line Socket Solderless $2.48

P1675 Lighter Plug Standard $1.68

P1684 Lighter Plug With 5A Fuse and LED $4.73

P1677 Lighter Socket Line Mount $3.08

P1690 Lighter Socket Panel Mount, 12V/24V $6.68

P1679 Lighter Socket Panel Mount, 12V Illum $8.70

P1686 Lighter Socket Double Adaptor Adjustable Angle $13.88

P1689 Switched Lighter Plug Lead 2.4m,Bare Ends $12.84

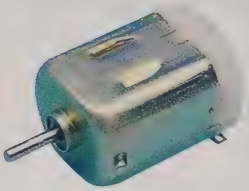
P1681 Lighter Extension Lead 2.7m long $9.87

P1688 Switched Lighter Extension Lead 3m Length $14.87

P1683 Lighter Accessory Lead 4m Length with DC Plug Set $9.78

P1692 Switched Lighter Accessory Lead 2.4m with DC Plugs $14.87

P1691 Lighter Socket 'Y' Adaptor $10.72



Low Speed/Low Torque Motor

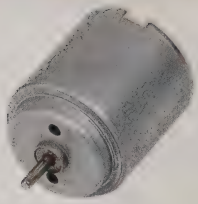
Voltage Range: 3-12V, Nominal Voltage: 3V, Speed (no load): 3600 RPM, Current (no load): 0.07A, Torque@ Max Efficiency: 3.07g-cm.
P9000

$2.48

Electric Motor - Medium Torque

1.5V-3.0V motor, ideal for use with battery powered projects. Spins at 13,800 rpm at no load, drawing 0.35A current.
P9002

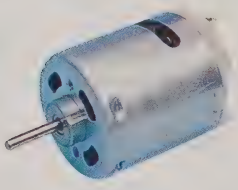
$3.48



Solar Module Motor

Voltage Range: 1.5-3V, Nominal Voltage: 1.5V, Speed (no load): 3,600 RPM, Current (no load):25mA, Torque @ Max Efficiency 1.8g-cm.
P8980

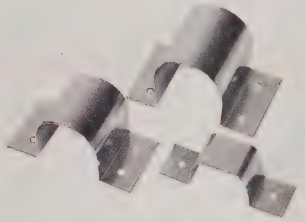
$3.93



High Speed/High Torque Motor

Voltage Range: 6-12V, Nominal Voltage: 12V, Speed (no load): 18,400 RPM, Current (no load): 0.30A, Torque@ Max Efficiency: 69.2g-cm.
P9004

$6.93



7 Piece Motor Mounting Bracket Set

Designed for firmly fixing our range of small electric motors to a surface. Contains two small, three medium, and two large brackets.
P9090

$2

Mini DC Dynamo

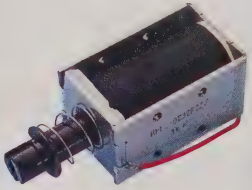
Minature DC dynamo suitable for a host of hobbies, school projects and experiments. With instructions and data.
P8951

$7.48

Planetary Gearbox Set

Instructional set that helps teach the design, construction, and workings of automotive transmissions and precision gearing systems. Includes 3VDC motor, mounting feet, grease, instructional manual and more.
P9051

$29.93



6V DC 900mA - 12V DC 1.8A Solenoid

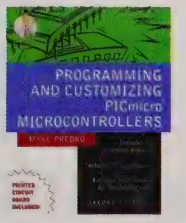
Great for hobbyists and experimenters. Make your own electrically operated door/gate lock. Size: 47.5 (L) x 29 (W) x 26.4 (H).
P9010

$19.07

Digitor Submersible Pump AT104

Ideal for creating scenic landscapes around your home, 2m lead, flow rate: 1500 litres per hour.
P8925

$29.88



Programming and Customising the PIC Microcontroller

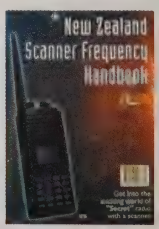
Fully updated and revised compendium of PIC programming information. Comes with CDROM and PIC programmer PCB.
B7491

$89.93

Practical Electronics For Inventors

This book gives you the information you need to develop and tune your electronics knowledge. It covers all the major aspects of modern electronics
B1636

$79.93



NZ Scanner Frequency Handbook

Newly updated comprehensive guide to NZ communication frequences.
B7496

$34.95

Digitor TV Skirting Outlet
This skirting board TV outlet features Coax PAL socket and direct entry saddle and screw connection.
P2006
$5.93

75 ohm Dud TV Outlet Sockets
Skirting board mount.
P2045
$7.93

300 ohm TV Surface Outlet EU37
Mounts to the skirting board.
P2081
$1

Insert Wall Plate
Architrave plate suits P2054 and P 2056
P2051
$3.93

Insert Wall Plate
Standard size plate suits P2054 and P2056
P2053
$4.93

Digitor Insert TV Socket
P2054
$3.73

Digitor TV Wall Outlet
Standard household TV outlet is ideal for Analogue TV reception systems and features Coax PAL socket and direct entry saddle and screw connection.
P2003
$6.43

Digitor TV/FM Wall Outlet
Standard household Television wall outlet is ideal for FM and Analogue reception systems and features coaxial PAL socket and direct entry saddle and screw connection. P2007
$8.93

Digitor Pay TV Wall Outlet
Standard shape professional TV outlet featuring f-connector socket ideal for SATV and MATV.
P2012
$7.95

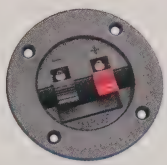
Digitor Digital TV Wall Outlet
The TV outlet features a PAL Coax socket front panel and F-connector rear socket input.
P2013
$9.95

Digitor F. Type Skirting Outlet
Wide body household TV outlet with professional grade F connector.
P2014
$7.95

Digitor Multi AV/RF Outlet
Standard size household RF & AV outlet featuring Coax PAL socket, F Connector socket and 4 RCA sockets.
P2008
$19.80

Digitor 2x RCA Wall Outlet
Standard size household AV outlet featuring 2 Gold plated RCA sockets for speaker connection.
P2009
$7.95

Digitor 4x RCA Wall Outlet
The outlet has 4 gold plated RCA sockets for speaker connection.
P2011
$9.95



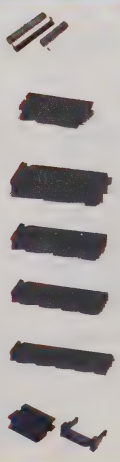
Speaker Terminal
2 pole round 75mm diameter spring terminals.
P1763
$3.44

NYLON MOLEX CONNECTORS

P5102	2 Way Nylon Plug & Socket	$3.48
P5103	3 Way Nylon Plug & Socket	$3.73
P5105	4 Way Nylon Plug & Socket	$3.93
P5106	6 Way Nylon Plug & Socket	$4.93
P5109	9 Way Nylon Plug & Socket	$5.43
P5112	12 Way Nylon Plug & Socket	$5.93
P5115	15 Way Nylon Plug & Socket	$6.23
P5120	PC Disk Drive Line Plug & Socket	$3.43
P5125	T' Type Nylon Plug & Socket	$2.93
P5100	Replacement Pin Set - 6 Male, 6 Female	$3.93

DIL IDC SOCKETS

P2744	16 Way D.I.L. IDC Socket	$1.00
P2746	20 Way D.I.L. IDC Socket	$1.00
P2748	26 Way D.I.L. IDC Socket	$1.00
P2750	34 Way D.I.L. IDC Socket	$1.00
P2752	40 Way D.I.L. IDC Socket	$1.00
P2754	50 Way D.I.L. IDC Socket	$1.00
P2755	10 way D.I.L IDC Socket NZ	$1.00



9 PIN SUB D CONNECTORS

A B C D E

A	P2684	Plug - Solder Type	$2.23
B	P2685	Socket - Solder Type	$2.23
C	P2683	PCB Mount Socket - Right Angle	$3
D	P2686	Plastic Backshell with Thumbscrews	$3.23
E	P9892	Chrome Backshell	$3.93

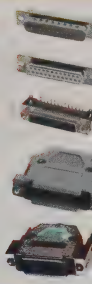
15 PIN SUB D CONNECTORS

A B C D E

A	P2687	Plug - Solder Type	$2.93
B	P2688	Socket - Solder Type	$2.93
C	P2710	High Density (VGA) Plug - Solder Type	$3.93
D	P2711	High Density (VGA) Socket - Solder Type	$3.93
E	P2689	Plastic Backshell	$2.93

25 PIN SUB D CONNECTORS

P2690	Plug - Solder Type	$4.26
P2691	Socket - Solder Type	$4.24
P2695	PCB Mount Socket - Right Angle	$4.00
P2692	Plastic Backshell with Thumbscrews	$4.24
P9894	Chrome Backshell	$4.20



SUB D ACCESSORIES

P2724	Hex Extender Nuts - 2 Pack	$0.60
P2725	Hex Sockets - Screw Jack, 2 Pack	$1.23

SNAP OFF HEADER PINS

P2726	25 Way SIL Snapoff Header Pins	$1.48
P2728	50 Way (25x2) DIL Snap Off Header Pins	$2.93

SIL HEADER PINS & PLUGS

P2731	2 Way SIL Header Pin & Plug	$2.23
P2733	3 Way SIL Header Pin & Plug	$2.33
P2735	12 Way SIL Header Pin & Plug	$3.93

Audio Cables

RCA Plugs to RCA Plugs

Description	Length	Cat No.	Price
plug - 1 plug x 4 Cables	1m	C1069	$20.98
plug - 1 plug	2m	C1070	$15.98
plug - 1 plug	5m	C1071	$17.98
plug - 1 plug	10m	C1074	$19.98
plug - 2 plugs	2m	C1190	$16.98
plug - 2 plugs	5m	C1170	$18.98
plugs - 2 plugs	340mm	C1185	$14.98
plugs - 2 plugs	2m	C1180	$16.98
plugs - 2 plugs (Harmony Gold)	2m	C1924	$28.98
plugs - 2 plugs	5m	C1181	$18.98
plugs - 2 plugs	10m	C1186	$20.98
plugs - 4 plugs	2m	C1061	$17.98
plugs - 2 plugs	1.8m	C0582	$20.87
plugs - 2 plugs	5m	C0583	$23.98
plugs - 2 plugs	10m	C0584	$28.98

RCA Plugs to RCA Sockets

Description	Length	Cat No.	Price
plug - 1 socket	2m	C1280	$15.98
plug - 1 socket	5m	C1072	$17.98
plug - 2 sockets	250mm	C1242	$14.98
plug - 2 sockets	1m	C1243	$15.98
plugs - 2 sockets	2m	C1182	$16.98
plugs - 2 sockets (piggyback)	5m	C1245	$19.97
plug - 2 sockets	5m	C1187	$18.98
plug - 2 sockets	10m	C1172	$20.98

3.5mm Mono Plugs to 3.5mm Mono Sockets

Description	Length	Cat No.	Price
plug - 1 socket	2m	C1150	$15.98

3.5mm Mono Plugs to RCA Plugs

Description	Length	Cat No.	Price
plug - 2 plugs	2m	C1250	$16.98

3.5mm Mono Plugs to RCA Sockets

Description	Length	Cat No.	Price
plug - 2 sockets	250mm	C1252	$14.98

3.5mm Plugs to 3.5mm Plugs

Description	Length	Cat No.	Price
lono 1 plug - 1 plug	2m	C1090	$15.98
tereo 1 plug - 1 plug	2m	C1158	$15.98
tereo 1 plug - 1 plug	1.8m	C0589	$20.87

3.5mm Plugs to 3.5mm Stereo Sockets

Description	Length	Cat No.	Price
plug - 1 socket	2m	C1159	$15.98
plug - 1 socket	5m	C1165	$20.98
plug - 2 socket	1m	C1161	$15.98
plug - 1 socket	1.8m	C0590	$20.87

3.5mm Plugs to RCA Plugs

Description	Length	Cat No.	Price
tereo 1 plug - 2 plugs	2m	C1240	$16.98
lono 1 plug - 1 plug	2m	C1080	$15.98
tereo 1 plug - 2 plugs	1.8m	C0588	$21.98

3.5mm Stereo Plugs to RCA Sockets

Description	Length	Cat No.	Price
plug - 2 sockets	250mm	C1253	$14.98

3.5mm Stereo Sockets to RCA Plugs

Description	Length	Cat No.	Price
socket - 2 plugs	250mm	C1255	$14.98

6.5mm Mono Plugs to 6.5mm Mono Plugs

Description	Length	Cat No.	Price
plug - coiled right angled plug	4m	C1109	$16.98
plug - 1 plug	2m	C1121	$15.98

6.5mm Mono Plugs to RCA Plug

Description	Length	Cat No.	Price
plug - 1 plug	2m	C1107	$15.98

6.5mm Stereo Plugs to 6.5mm Stereo Sockets

Description	Length	Cat No.	Price
plug - 1 plug	5m	C1166	$20.98

6.5mm Stereo Plugs to RCA Plugs

Description	Length	Cat No.	Price
1 plug - 2 plugs	2m	C1101	$16.98

6.5mm Stereo Plugs to RCA Sockets

Description	Length	Cat No.	Price
1 plug - 2 sockets	2m	C1095	$14.98

5 Pin DIN Plugs to Pin DIN Plugs

Description	Length	Cat No.	Price
1 plug - 1 plug	2m	C1011	$16.98

5 Pin DIN Plugs to RCA Plugs

Description	Length	Cat No.	Price
1 plug - 2 plugs	2m	C1021	$16.98

Video Cables

TV Plug to TV Plug

Description	Length	Cat No.	Price
Cable TV plug - TV plug	2m	C1400	$11.87
Cable TV plug - TV plug	4m	C1401	$16.98
Cable TV plug - TV plug	10m	C1420	$19.98

TV Plug to TV Socket

Description	Length	Cat No.	Price
Cable TV plug - TV socket	2m	C1405	$13.98
Cable TV plug - TV socket	4m	C1406	$16.98

TV Plug to RCA Plug

Description	Length	Cat No.	Price
Cable Video RCA - TV plug	2m	C1286	$13.98

RCA Plug to RCA Plug

Description	Length	Cat No.	Price
Cable 75 ohm RCA plg - RCA plg Video cable 75 ohm Coax	2m	C1288	$16.98
RCA plg - RCA plg	5m	C1421	$18.98
Cable Video RCA plg - RCA plg	10m	C1422	$20.98
3 plugs - 3 plugs	2m	C1289	$22.98
3 plugs - 3 plugs	5m	C1423	$25.98
3 plugs - 3 plugs	1.8m	C0585	$28.98
3 plugs - 3 plugs	5m	C0586	$32.98
3 plugs - 3 plugs	10m	C0587	$38.98

S - Video Plug to RCA Plug

Description	Length	Cat No.	Price
Cable 4 Pin SVHS - 1RCA plug	1.5m	C1244	$19.98
Cable 4 Pin SVHS - 2RCA plug	1.5m	C1233	$18.98

S - Video Plug to S - Video Plug

Description	Length	Cat No.	Price
Cable 4 Pin SVHS - 4 Pin SVHS	1.5m	C1234	$19.98
4 Pin SVHS - 4 Pin SVHS	2m	C1970	$19.98
4 Pin SVHS - 4 Pin SVHS	2m	C1950	$21.98
Cable 4 Pin SVHS - 4 Pin SVHS	5m	C1247	$24.98
Cable 4 Pin SVHS - 4 Pin SVHS	10m	C1239	$29.98

BNC Plug to BNC Plug

Description	Length	Cat No.	Price
Cable Video BNC - BNC plug	2m	C1285	$20.98

BNC Plug to RCA Plug

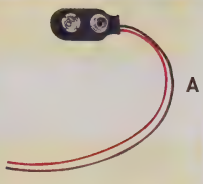
Description	Length	Cat No.	Price
Cable BNC plug - RCA plug	1.5m	C1290	$18.98

SCART Cables

Description	Length	Cat No.	Price
Scart plug - 6 x RCA plug + 2 BNC	1.5m	C1235	$34.98
Cable Scart - SVHS +2X RCA plug	1.5m	C1236	$24.98
Scart plug -Scart plug	1.5m	C1210	$29.98

BATTERY HOLDERS

A	S 6100	9 Volt Battery Snap	$0.56
B	S 6143	AAA x 2	$1.68
C	S 9106	AA x 1 - PCB Mount	$1.28
D	S 6112	AA x 2	$0.98
E	S 6155	AA x 2 - Switched	$1.94
F	S 9107	AA x 2 - PCB Mount	$1.98
G	S 6153	AA x 3 - Switched	$2.46
H	S 9108	AA x 3 - PCB Mount	$2.43
I	S 6114	AA x 4	$1.38
J	S 6124	AA x 4	$1.44
K	S 9109	AA x 4 - PCB Mount	$2.43
L	S 6116	AA x 6	$1.68
M	S 6128	AA x 8	$2.24
N	S 6103	C x 1	$1.38
O	S 6101	D x 1	$1.34
P	S 6102	D x 4	$2.44
Q	S 9110	D x 6	$3.32
R	S 6147	N x 1	$1.78

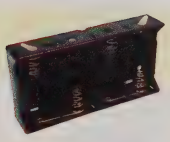

A

B

E

G

N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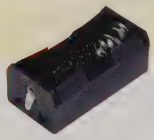
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CRIMP CONNECTORS

The colour of the insulation on the terminals relates to the cable size that th
are suited to.

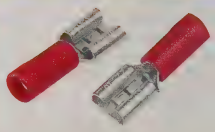
- Red terminals suit cables from approximately 0.4mm² to 1.0mm².
- Blue terminals suit cables from approximately 1.1mm² to 2.6mm².
- Yellow terminals suit cables from approximately 2.5mm² to 6.5mm².

STRAIGHT WIRE JOINERS

Part No	Description	Pack Qty	Price
H 3231	Red	10pk	$3.98
H 3232	Blue	10pk	$3.98
H 3234	Red	50pk	$9.98

FEMALE RECEPTACLES

H 3200	Red 2.8mm	10pk	$3.98
H 3201	Red 4.8mm	10pk	$3.98
H 3202	Red 4.8mm	50pk	$9.98
H 3203	Red 6.4mm	10pk	$3.98
H 3204	Red 6.4mm	50pk	$9.98
H 3205	Blue 6.4mm	10pk	$3.98
H 3206	Blue 6.4mm	50pk	$9.98
H 3207	Red Insulated 6.4mm	10pk	$3.98
H 3208	Red Insulated 6.4mm	50pk	$9.98

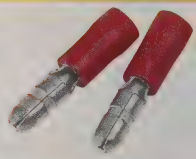


MALE TABS 6.4mm

H 3228	Red	10pk	$3.98
H 3229	Red	50pk	$9.98
H 3230	Blue	10pk	$3.98
H 3233	Blue	50pk	$9.98

BULLET TERMINALS

H 3222	Red Male 4mm	10pk	$3.98
H 3223	Red Male 4mm	50pk	$9.98
H 3224	Blue Male 5mm	10pk	$3.98
H 3225	Red Female 4mm	10pk	$3.98
H 3226	Red Female 4mm	50pk	$9.98
H 3227	Blue Female 5mm	10pk	$3.98



SPADE TERMINALS

H 3219	Red 3.2mm	10pk	$3.98
H 3220	Blue 4.3mm	10pk	$3.98
H 3221	Yellow 5.3mm	10pk	$3.98

RING TERMINALS

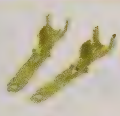
H 3210	Red 3.2mm	10pk	$3.98
H 3211	Red 4.3mm	10pk	$3.98
H 3212	Red 5.3mm	10pk	$3.98
H 3213	Blue 5.3mm	10pk	$3.98
H 3214	Blue 6.5mm	10pk	$3.98
H 3215	Blue 8.4mm	10pk	$3.98
H 3216	Yellow 6.5mm	10pk	$3.98
H 3217	Yellow 8.4mm	10pk	$3.98
H 3218	Yellow 10.5mm	10pk	$3.98

CRIMP TERMINALS

Bullet Terminals Male 10pk
H5006 $2.98

Bullet Terminals Female 10pk
H5008 $2.98

TAB CONNECTORS

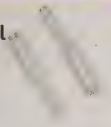


2.8 Male Spade Terminal 15pk
H5038 $2.98

2.8mm Female Spade Terminal 15pk
H5036 $2.98

6.3mm Male Spade Terminal 10pk
H5016 $2.98

TERMINAL COVERS



Bullet Terminal Female Plastic Cover 10pk
H5009 $2.78

6.3mm Spade Terminal Plastic Cover 10pk
H5022 $2.98

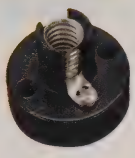
TERMINAL PACKS

Assorted Crimp Lug Pack
30 crimp lugs of various types and sizes including joiners. All with insulation attached. $9.70
H1996 LIMITED STOCK

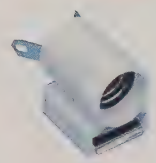
Assorted Crimp Connectors
320 pieces of assorted terminals including blade, bullet, eye, butt splice, and wire tap. $54
H5070

GLOBES AND HOLDERS

MES Light Bulb Socket
Screw terminals for cable allow use without soldering. Suits all Miniature Edison Screw (MES) bulbs.
P8161 $2.68



MES Bulb Socket
With mounting slot. Solder terminals. To suit standard MES bulbs.
P8162 $1.93



MES Bulbs

P8147	1.5V 300mA	
P8150	6V 300mA	
P8152	12V 300mA	
P8153	12V 100mA	

$0.58

Torch Globes
Heavy-duty screw-type torch globes.

S5081	1.2V
S3948	2.3V
S3947	2.5V
S3944	3.7V
S3946	6.2V

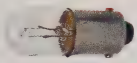
$1.48

MBC Bulb Socket
MBC with right angle bracket and mini solder tags.
P8171 $1.73

Globes MBC Tubular

P8183	1.5V 300mA
P8185	6.3V 300mA
P8176	12V 300mA

$0.58



Miniature Bulbs

P8155	12V 50MA Long
P8159	12V50MA Short

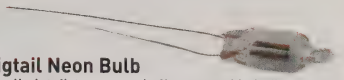
$0.74

Mini Bi-Pin Bulb
Suitable for many car alarm warning lights as well as our illuminated switches. 12V. 60mA. Suits P7580/82/84/86, etc.
P8158 $3.48

5mm 'Grain of Wheat' Bulb
12V 50mA with Pigtail Leads.
P8140 $0.84

3mm Pilot Globes

P8120	1.5V RED Lens	$0.86
P8121	1.5V GREEN Lens	$0.86
P8122	1.5V BLUE Lens	$0.86
P8123	1.5V YELLOW Lens	$0.86
P8124	1.5V ORANGE Lens	$0.86
P8130	12V YELLOW Wires	$0.86
P8132	1.5V RED Wires	$0.86
P8133	3V GREEN Wires	$0.86



Pigtail Neon Bulb
Small pigtail-type neon bulbs as used in indicators, timing circuits, etc. Striking voltage 70-90 volts @ 600uA. For 240 volts use 220K 1/4W resistor in series.
P8160 $0.52

BEZELS

LED Bezel
High visibility with low current drain (20mA @ 2V). Chrome finish. Requires 8mm panel hole.

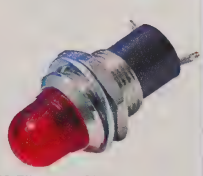
P8104	RED
P8106	GREEN

$1.58

12V Bezel
Supplied with P 8155 LES Filament Globe
Mounting Hole: 11mm
Clearance: 24mm

P8100	RED + 12V LES Globe
P8102	GREEN + 12V Globe

$2.24



Bezel Round + 12V Globe
Supplied with P 8159 LES Filament Globe
Mounting Hole: 11mm
Clearance: 21mm

P8050	RED + 12V Globe
P8052	GREEN + 12V Globe
P8054	AMBER + 12V LES Globe
P8056	BLUE + 12V Globe

$1.64

Blade Fuses

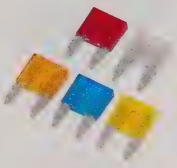
ATC Car Blade Fuses

Description:	Cat No:	Description:	Cat No:
5A Tan	P7988	25A Clear	P7998
7.5A Brown	P7990	30A Green	P7999
10A Red	P7992	35A Purple	P7997
15A Blue	P7994	40A Orange	P8001
20A Yellow	P7996		

.95 ea

Assorted Mini Blade Fuse Pack

A handy assortment of fuses used in modern cars.
Consists of 5, 10, 15, 20 and 25 Amp fuses.



P9362 **$3.95 pk**

M205 Fast Blow Fuses 6 Pack

Description:	Cat No:	Description:	Cat No:
125mA	P9640	1.6A	P9648
250mA	P9642	2A	P9649
315mA	P9643	2.5A	P9650
500mA	P9644	3A	P9651
750mA	P9645	3.15A	P9652
1A	P9646	4A	P9653
1.25A	P9647	5A	P9654
		10A	P9655

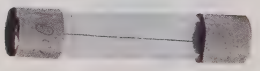
$1.98 pk

M205 Slow Blow Fuses 6 Pack

Description:	Cat No:
500mA	P9620
1A	P9621
2A	P9622
2.5A	P9623
3.15A	P9624
4A	P9625
5A	P9626

$5.98 pk

3AG Fast Blow Fuses 6 Pack



Description:	Cat No:	Description:	Cat No:
1A	P9672	10A	P9679
1.5A	P9673	15A	P9680
2A	P9674	20A	P9681
2.5A	P9675	25A	P9682
3A	P9676	30A	P9683
5A	P9677	35A	P9684
7.5A	P9678		

$1.98 pk

Ceramic Fuses

M205 20 x 5mm 6 pack

Description:	Cat No:
630mA	P9690
8A	P9691
10A	P9692

$5.98 pk

3AG 32 x 6mm Single

Description:	Cat No:
7A	P8507
8A	P8508

$1.95 ea

3AG 32 x 6mm 6 Pack

Description:	Cat No:
8A	P9695
10A	P9696

$5.98 pk

Thermal Fuses

Made in Japan. 10A 240V

Description:	Cat No:
96˚C	P7984
139˚C	P7986

$3.50 ea

Fuse Wire

A handy pack of fuse wire for use in mains fuse boxes.
5A, 10A, 15A H3182
8A, 16A, 20A, 30A H3182

$2.50 ea

Fuse Holders

3AG Light Duty Non-UV Polyethylene 12 VDC 3A with 600mm leads
P7912

$2.50

3AG Heavy Duty 12 VDC 20A with 100mm leads
P7913

$3.10

ATC Blade Holder 12VDC 30A. With protection cap and 300mm #12 leads
P7913

$2.95

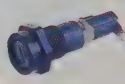
Screw Cap Holder
M-205 Type P7913
3AG Type P7902

$2.35

$2.95

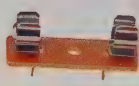
Fingerproof Safety Holder Don't be fooled by imitations!
M-205 (20 X 5mm) P7914
3AG (32 X 6mm) P7916

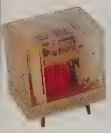
$2.35

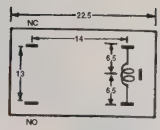


PCB Mount Fuseholder 3AG Clips on phenolic base.
P7908

$2.35



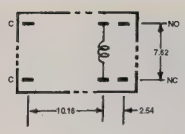




SPDT 8V DC – 12V DC Relay

Contact Current (max): 3A @ 120V AC
Contact Voltage (max): 250V AC
Coil Voltage (nom): 9V DC
Coil Resistance: 225 ohm
Operating Time (typical): 15ms
Release Time (typical): 10ms

P8008 **$4.93**

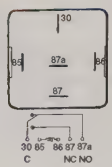


SPDT 5V DC Relay

High sensitivity type. Gold-overlay silver contacts.

Contact Rating: 28V DC @ 1A, 120V AC @ 0.5A
Contact Switching Current: 2A
Contact Switching Voltage: 150V DC
Coil Resistance: 120 ohm @42mA, 5V DC
Operating Time (typical): 5ms
Release Time (typical): 5ms.
Overall Size: 15.6(l) x 10.6(w) x 10.5(h)mm

P8005 **$8.66**

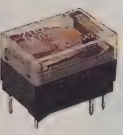


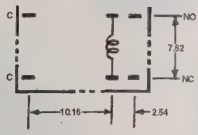
SPDT 12V DC Horn Relay

Ideal for car/boat horn circuits, alarms, ignition cut-outs or any application where high currents have to be switched.

Contact Current: 20A DC
Contact Voltage: 12V DC
Coil Voltage: 12V DC
Termination: Spade lugs
Overall size: 30(l) x 30(w) x 26(h)mm

P8035 **$7.66**



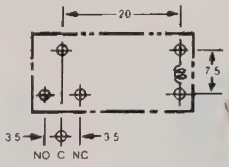


SPDT 12V DC Relay

High sensitivity type. Gold-overlay silver contacts.

Contact Rating: 28V DC @ 1A, 120V AC @ 0.5A
Contact Switching Current: 2A
Contact Switching Voltage: 150V AC
Coil Resistance: 700 ohm @ 17mA 12V DC
Operating Time (typical): 5ms
Release Time (typical): 5ms
Overall Size: 15.6(l) x 10.6(w) x 10.5(h)mm.

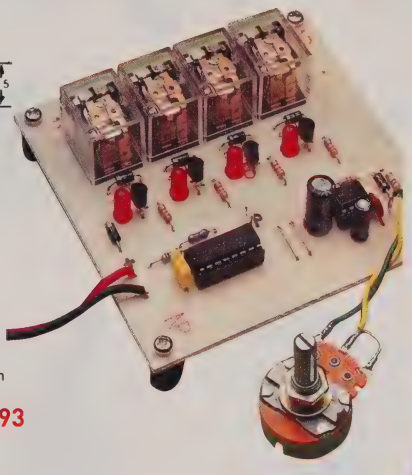
P8007 **$8.66**



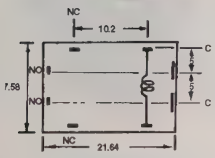
SPDT 12V DC High-Power Relay

Contact Current (max): 10A
Contact Voltage (max): 240V AC, 30VDC
Nominal Coil Voltage: 12V DC
Coil Resistance: 200 ohm
Operating Time (typical): 20ms
Release Time (typical): 10ms
Overall Size: 29(l) x 13(w) x 25(h) mm

P8010 **$9.93**



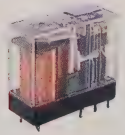
DPDT

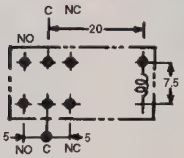


DPDT 12V DC Relay

Contact Current (max): 5A @ 120V AC
Contact Voltage (max): 120VAC
Coil Voltage (nom): 12V DC
Coil Resistance: 280 ohm
Operating Time (typical): 10ms
Release Time (typical): 7ms.

P8024 **$5.66**

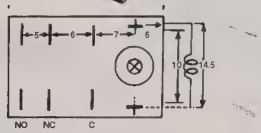




DPDT 12V DC High-Power Relay

Contact Current (max): 10A
Contact Voltage: 240V AC, 30V DC
Nominal Coil Voltage: 12V DC
Coil Resistance: 200 ohm
Operating Time (typical): 20mS
Release Time (typical): 10mS.

P8012 **$12.93**



DPDT 12V DC Heavy Duty Relay

High contact to coil voltage isolation.

Contact Current (max): 10A
Contact Voltage (max): 240V AC
Nominal Coil Voltage: 2V DC
Coil Resistance: 160 ohm
Operating Time (typical): 20ms
Release Time (typical): 20ms.

P8014 **$14.93**

DICK SMITH ELECTRONICS That's where you go!

SPDT Ultraminiature Toggle Switch

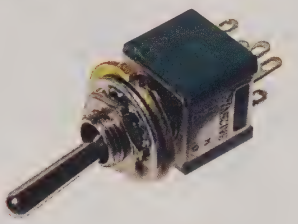
Rating: 240V AC 1.5A, Mounting: Threaded bush, Overall Size: 8x5x28mm, Clearance: 14.5mm, Clear Out: 5mm.
P7673

$3.42

DPDT Ultraminiature Toggle Switch

Rating: 125V AC 3A, Mounting: Threaded bush, Overall Size: 11x9x28mm, Clearance: 14.5mm, Cut Out: 5mm.
P7674

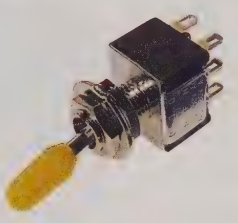
$4.22



DP3T Miniature Centre "Off" Toggle Switch

Momentary "on" one side only
Rating: 240V AC 2A, Mounting: Threaded bush, Overall Size: 12x12x35mm, Clearance: 14.5mm, Clear Out: 6.5mm.
P7682

$5.14



DP3T Miniature Centre "Off" Toggle Switch

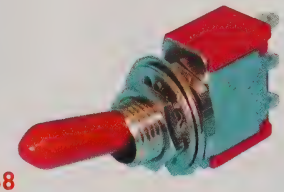
Momentary side only
Rating: 240V AC 2A, Mounting: Threaded bush, Overall Size: 13x12x33mm, Clearance: 14.5mm, Clear Out: 6.5mm.
P7684

$5.40

SPDT Miniature Toggle Switch

Rating: 240V AC @ 2A, Mounting: threaded bush, Overall Size: 13x7x33mm, Clearance: 14mm, Cut Out: 6.5mm.
P7654

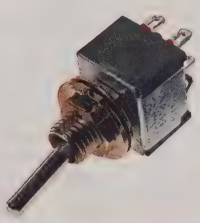
$3.68



DPDT Miniature Toggle Switch

Rating: 240V AC @ 2A, Mounting: Threaded bush, Overall Size: 13x12x33mm, Clearance: 14.5mm, Clear Out: 6.5mm.
P7656

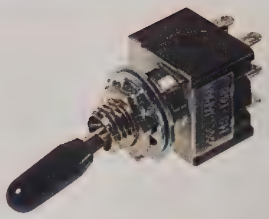
$4.18



DPDT Miniature Heavy Duty Toggle Switch

Rating: 125V AC10A, Mounting: Threaded bush, Overall Size: 13x13x36mm, Clearance: 19mm, Clear Out: 6mm.
P7652

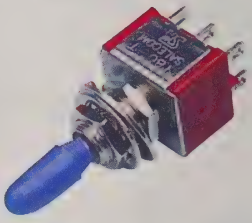
$6.36



DP3T Miniature Centre "Off" Toggle Switch

Momentary "On" Both Sides,
Rating: 240V AC 2A, Mounting: Threaded bush, Overall Size: 13x7x33mm, Clearance: 14.5mm, Clear Out: 6.5mm.
P7689

$5.53



SPST Standard Toggle Switch With "On/Off" Indicator Plate

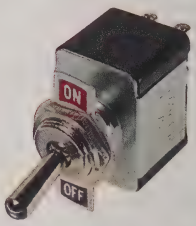
Rating: 125V AC 3A, Mounting: Threaded bush, Overall Size: 14x27x42mm, Clearance: 20.5mm, Cut Out: 12mm
P7668

$2.24

DPDT Standard Toggle Switch With "On/Off" Indicator Plate

Rating: 125V AC @ 6A, Mounting: Threaded bush, Overall Size: 18x25x48mm, Clearance: 26mm, Cut Out: 12mm, Terminals: Solder.
P7670

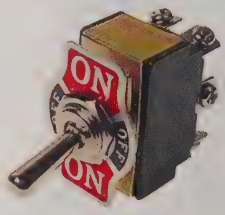
$2.68



DP3T Standard Centre "Off" Toggle Switch

Momentary "on/off" Indicator Plate.
Rating: 125V AC @2A, Mounting: Threaded bush, Overall Size: 18x25x48mm, Clearance: 26mm, Clear Out: 12mm, Terminals: Solder, Centre 'off' position with indicator plate.
P7672

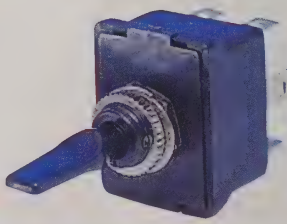
$4.92



DP3T Standard Centre "Off" Toggle Switch

Momentary "On"Both Sides,
Rating: 12V DC 20A, Mounting: Threaded bush, Overall Size: 26x33x65mm, Clearance: 31mm, Cut Out: 12mm.
P7650

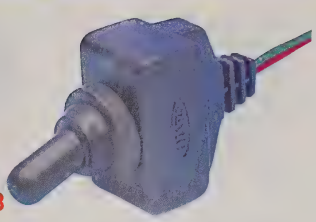
$8.58



SPST Standard Toggle Switch Waterproof

Rating: 12V DC 10A, Mounting:Threaded bush, Overall Size:32x18x58mm, Clearance:40mm, Cut Out:12mm, Terminals: Flying Leads.
P7664

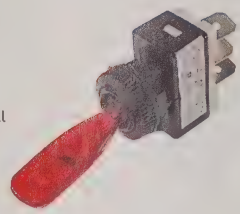
$14.93



SPST Illuminated Toggle Switch

Contacts:12V DC 16A, Lamp:12V, Mounting: Threaded bush, Overall Size:15x25x65mm, Clearance: 26mm, Cut Out:12mm.
P7666

$4.83



Weatherproof Toggle Switch Hood

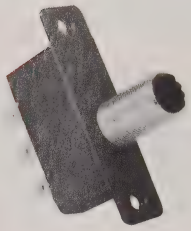
Designed for miniature toggle switches. H1914

$1.48

DPDT Sw Slide Mini BLK

Rating: 50VDC 0.5A
Mounting: 2 x M2 Screw Holes (tapped)
Overall size: 23 x 8 x 19mm. Clearance: 12mm. Cut out: 9 x 4.5mm.
P7613

$1.32



DPDT Miniature Slide Switch

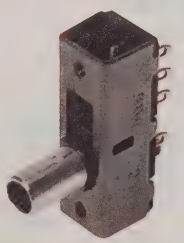
Rating: 50VDC 0.5A, Mounting: 2xM2 Screw Holes, Overall Size:23x8x19mm, Clearance:12mm, Cut Out: 9x4.5mm.
P7610

$1.34

DP3T Miniature Slide Switch

Rating: 50VDC 0.5A, Mounting: 2xM3 Screw Holes, Overall Size: 24x8x21mm, Clearance: 12mm, Cut Out: 5x12mm.
P7614

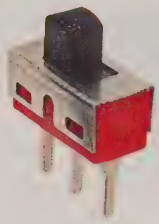
$1.73



SPDT PCB Mount Slide Switch

Rating: 26VDC 6A, Mounting: PCB, Overall Size: 13x7x18mm, Clearance: 13mm, Cut Out: 4x8mm.
P7602

$2.34



SPST Momentary "On" Push Button Switch

Rating: 120VAC 1A, Mounting: Threaded bush, Overall Size: 9x5x18mm, Clearance: 14.5mm, Cut Out: 5mm, Ultra Miniature.
P7559

$3.70

SPST Momentary "On" Push Button Switch

Rating: 120VAC 0.5A, Mounting:Threaded bush/ PCB, Overall Size:7x20.6mm, Clearance:13mm, Cut Out:5mm, Pin Size:1mm, Extra small. Made in Japan.
P7558

$4.28

Single Pole Miniature Normally Open Push button switch

Rating: 125V AC 1A, Mounting:Threaded bush, Overall Size:28.1x9.5mm, Clearance:17.5mm, Cut Out:7.1mm.
Black P9750
Red P7560
White P9768

$1.48

Single Pole Miniature Normally Closed Push Button Switch

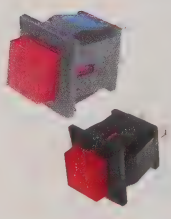
Rating: 125V AC 1A, Mounting: Threaded bush, Overall Size: 28.1x9.5mm, Clearance: 17.5mm, Cut Out: 7.1mm, Model: MS-313.
Black P7561
Red P9751

$2.63

SP Momentary Action Push 'On' Push Button Switch

Rating: 240VAC 1A, Mounting:Snap Lock, Overall Size:14x14x24.5mm, Clearance:19.5mm, Cut Out: 11x12.5mm.
Red P7552
Blue P7550

$2.94



SPST Momentary Push Switch

Rating: 250V AC @ 3A, Mounting: Round Panel Mount, Overall Size: 35.5x17mm diam., Clearance: 15mm, Cut Out: 12mm diam., Pin Spacing: 5mm, Red Push On.

P9755 **$3.93**

SPST Momentary Push Button Switch

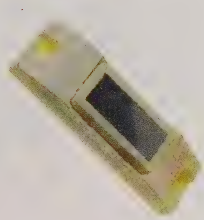
Rating: 250V AC @ 1A, Mounting: Round Plated, Overall Size: 31mm, Clearance: 11.5mm, Cut Out:10.2mm, Pin Spacing:4.6mm, Round Head Push On.

P9762 **$5.93**

Door Bell Button

Momentary action push 'on' switch rated at 24VDC 1A. Two screw holes on the switch allow for easy fixing to a baseboard or panel. Overall size 23mm x 77mm.

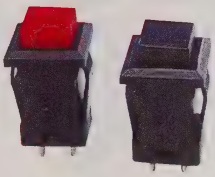
P7554 **$3.93**



SPST Mini Push "On/Off" Switch

Rating: 250V AC 1A, Mounting: Snap Lock, Overall Size: 14.2x14.2x28mm, Clearance: 22mm, Cut Out:11x12.5mm.

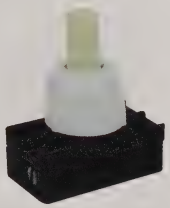
Red P7540
Black P7542 **$2.94**



SPST Lamp Switch

Rating: 240VAC 2A, Mounting: Threaded bush, Overall Size: 13x23x29mm, Clearance: 11mm, Cut Out: 10mm, Terminals: Screw.

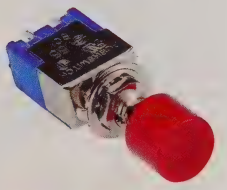
P7874 **$2.08**



Switch Alternative SPDT 250V 3A

Rating: 250VAC 3 Amps Mounting: Threaded Bush, Overall Size: 43.3 x 13 x 8.5mm, Clearance: 26mm, Cut Out: 5.8mm

P7575 **$5.36**



SPST Momentary Action Push 'On' Push Button Switch

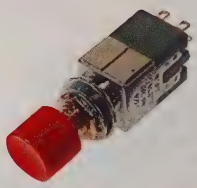
Rating: 250V AC 3A, Overall Size: 15x15x37.8mm, Clearance: 27.3mm, Cut Out:12mm, Mounting:Threaded bush.

P7568 **$3.77**

DPDT Momentary Action Push Button Switch

Rating: 125VAC 3A, Mounting: Threaded bush, Overall Size: 41.5x13x13mm, Clearance: 26.1mm, Cut Out: 6mm, Model: MS-300.

P7574 **$7.76**



SPST Alternate Action Push Button Switch

Rating: 250V AC 3A, Overall Size: 15x15x37.8mm, Clearance: 27.3mm, Cut Out: 12mm, Mounting: Threaded bush.

P7566 **$3.48**

Sw Push On/Off SPST Mini Black

Rating: 250V AC 1A, Mounting: Snap Lock, Overall Size: 14.2x14.2x28mm, Clearance: 22mm, Cut Out:11x12.5mm.

P7542 **$4.44**

DPDT Lamp Switch

Rating: 240VAC 2A/Pole, Mounting:Threaded bush, Overall Size: 13x23x33mm, Clearance:17mm, Cut Out:10mm, Terminals:Screw.

P7876 **$3.48**

SPST On/Off Push Button Switch

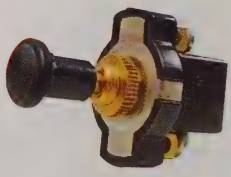
Rating: 250V AC @ 3A, Mounting: Round Panel Mount, Overall Size: 35.5x17mm diam., Clearance: 15mm, Cut Out: 12mm diam., Pin Spacing: 5mm, Back On/Off Latching.

P9757 **$6.44**

SP Pull On/Push Off Common Ground Push Button Switch

Rating: 12VDC 5A, Mounting: Threaded Bush, Overall Size: 30x22.5x42.4mm, Clearance: 21.6mm, Cut Out: 7.85mm, Terminals: Screw.

P7563 **$5.93**



SPST NON-Illuminated Rocker Switch

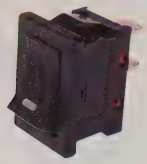
Rating: 240VAC 6A, Overall Size: 23.2x23.2x26.8mm, Clearance: 24mm, Cut Out:18mm, Mounting: Panel Lock Nut.
P7699

$1.74

SPST NON-Illuminated Rocker Switch

Rating: 12VDC 2A, Overall Size: 15.5x21x23.5mm, Clearance: 17.5mm, Cut Out: 13x19mm, Mounting: Snap Lock.
P7700

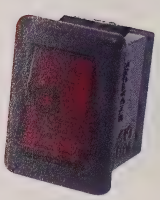
$2.64



SPST Illuminated Rocker Switch

Rating: 250VAC 6A, Illumination: 240V Neon, Overall Size: 15x20x25mm, Clearance: 22mm, Cut Out: 12.9x19.2mm, Mounting: Snap Lock.
P7703

$5.23



SPST Illuminated Rocker Switch

Rating: 240VAC 15A, Illumination: 240V Neon, Overall Size: 14x29.8x41.2mm, Clearance: 33.3mm, Cut Out: 11.5x28.4mm, Mounting: Snap Lock.
P7705

$2.64

SPST Illuminated Rocker Switch

Rating: 12VDC 30A, Illumination: 12V Lamp, Overall Size: 30.6x19.2x44.72mm, Cut Out: 12x10.8mm, Clearance: 35.5mm, Mounting: Snap Lock.
Red P7726
Green P7723

$5.73

DPST Illuminated Rocker Switch

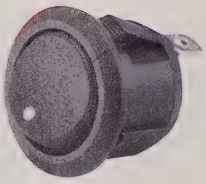
Rating: 240VAC 15A, Illumination: 240V Neon, Overall Size: 22.73x30.35x33mm, Clearance: 31mm, Cut Out: 27.2x22.1mm, Mounting: Snap Lock.
P7707

$6.93

SPST NON-Illuminated Rocker Switch

Rating: 240VAC 6A, Flange Diameter: 22.95mm Round, Cut Out: 19.84mm, Clearance: 23.8mm, Mounting: Snap Lock.
P7701

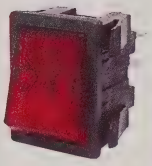
$2.48



DPDT 12V Illuminated Rocker Switch

Rating: 240VAC 10A, Illumination: 12V Lamp, Overall Size: 23x30.5x33mm, Clearance: 30mm, Cut Out: 27x22mm, Mounting: Snap Lock.
P7708

$5.54



DP3T NON-Illuminated Rocker Switch

Switching: Momentary "ON", Both Sides Centre, Return OFF, Rating: 250VAC 5A, Overall Size: 44x25x46mm, Clearance: 40mm, Cut Out: 34x20mm, Mounting: Snap Lock.
P7730

$7.24

DPDT NON-Illuminated Rocker Switch

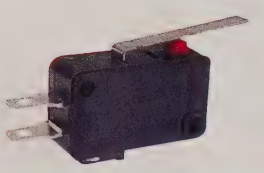
Rating: 250VAC 3A, Overall Size: 20x30x30.7mm, Clearance: 15.7mm, Cut Out: 17mm, Mounting: Panel Lock Nut.
P7720

$6.26

SPDT Micro Switch

Rating: 250VAC 10A, Overall Size: 38x21x10mm, Mounting: Screw.
P7800

$4.93



SPDT Mini Micro Switch

Rating: 240VAC 1.5A, Overall Size: 20x15x7mm, Mounting: Screw.
P7802

$3.48

8-Way SPST PCB DIP Switch

Rating: 24VDC 50mA; (Make & Break), 50VDC 100mA(Steady); Overall Size: 22x16x 10mm; Mounting: PCB. P7854

$2.76

Mini Reed Switch

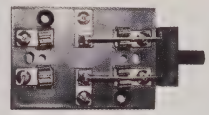
Rating: 200VDC 0.5A, Glass Size:12.7mm x 1.8mm, Switch: Normally Closed (with Magnet).
P7856

$1.78

Mercury "Tilt" Switch

Rating: 24VDC 1.5A
Glass Size: 25x6mm (approx)
P7860

$2.44



DPDT Knife Switch

Rating: 50VDC, Overall Size: 43x79x20mm, Body Size: 43x60x6mm, Terminals: Screw, Made in Japan.
P7862

$7.94

Precision-made Rotary Sw Rotary 6mm 6Pole 2Positions, 1Gang

Suitable for PCB mounting or panel mounting (9mm mounting hole). Shafts are of the standard (6mm) metric fluted types. They will accept any standard 6mm knob. Switch contacts are 'make before break' in order to help eliminate clicking and popping. Matching washers and nuts are provided with every switch. P7502

Poles	Positions	No.
4	3	P7504
3	4	P7506
2	5	P7508
2	6	P7510

LIMITED STOCK

$2ea

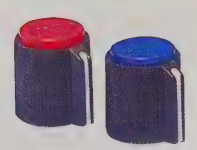
Variable Position Rotary Switches

Supplied with nut, lock washer and 'stop ring' which allows you to vary the number of switching positions. Rated 240V @ 150mA with silver plated brass contacts.

Poles	Positions	No.
1	2-12	P7518
4	2-3	P7520
2	2-6	P7522

LIMITED STOCK

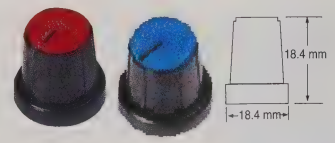
$4.34



13mm Diameter (less pointer)

Diameter: 13mm (less pointer)
Shaft type: Screw fit
P7072 Red P7074 Blue

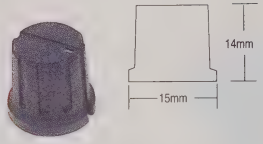
$2.44



18mm Diameter

Diameter: 18mm, Shaft type: 6mm, knurled push fit
P7040 Red P7042 Blue

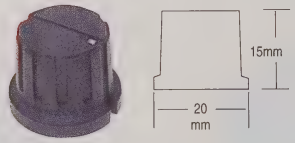
$1.04



12mm Diameter (15mm incl. Skirt)

Diameter: 12mm (15mm Including skirt),
Description: Screw fit, black.
P7020

$1.76



16mm Diameter (20mm incl. Skirt)

Diameter: 16mm (20mm Including skirt),
Description: Screw fit, black.
P7022

$1.84

24mm Diameter (35mm incl. Skirt)

Diameter: 29mm (35mm Including skirt),
Description: Screw fit, black.
P7026

$2.54

20mm Diameter (24mm incl. Skirt)

Diameter: 16mm (20mm including skirt),
Description: Screw fit, black.
P7024

$2.24

Knob Mini 15mm Push Fit

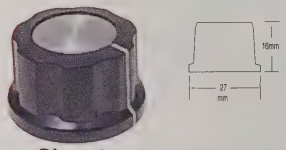
Miniature fluted sides with indicator.
Diameter: 10mm (15mm including skirt).
Shaft Type: 6mm Knurled push fit.
P7126

.76c

Plastic Knob 15mm Push Fit

Diameter: 12mm (15mm including skirt).
Description: Push fit, black.
P7010

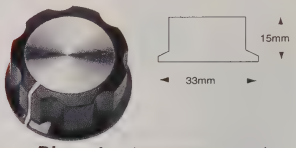
$1.84



24mm Diameter (27mm incl. Skirt)

Smooth bore with grub screw to fit 1/4" shafts,
Description: Silver top insert and pointer, black. P7106

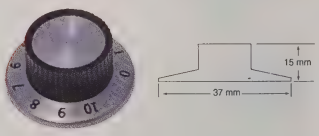
$1.68



30mm Diameter (33mm incl. Skirt)

Diameter: 30mm, (33mm including skirt).
Description: Smooth bore with a grub screw to fit 1/4" shafts, silver top insert. P7105

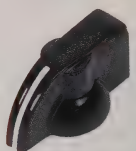
$1.78



24mm Diameter

Diameter: 24mm, 37mm including skirting with 0-10 calibration.
Description: Smooth bore with a grub screw to fit 1/4" shafts. P7104

$3.13



31.5mm Pointer Screw Knob

Type: 31.5mm Pointer. Base Diameter: 19mm. Height: 12.5mm. Shaft Type: Screw fiit.
P7102

$1.24

16mm SINGLE GANG LINEAR POTENTIOMETERS

Part No	Description		
	200mW 200VDC Metric Sharft (B)		
R7549	500 Ohms	R7561	100 kOhm
R7551	1 kOhm	R7563	250 kOhm
R7553	5 kOhm	R7565	500 kOhm
R7555	10 kOhm	R7567	1 MOhm
R7557	25 kOhm		
R7559	50 kOhm		

$3.38

24mm SINGLE GANG LINEAR POTENTIOMETERS

Part No	Description		
	0.5W 500VDC Metric Sharft (B)		
R6802	500 Ohms	R6810	100 kOhm
R6803	1 kOhm	R6812	500 kOhm
R6805	5 kOhm	R6813	1 MOhm
R6806	10 kOhm	R6814	2 MOhm
R6807	20 kOhm		
R6809	50 kOhm		

$2.68

VERTICAL MOUNT 5mm HORIZONTAL ADJUST

Part No	Description		
	0.1W 100VDC		
R1929	100 Ohm	R1949	200k Ohm
R1931	200 Ohm	R1951	500k Ohm
R1933	500 Ohm	R1953	1M Ohm
R1937	2k Ohm	R1954	2M Ohm
R1939	5k Ohm		
R1943	20k Ohm		
R1947	100k Ohm		

.90c

16mm SINGLE GANG LOGARITHMIC POTENTIOMETERS

Part No	Description		
	100mW 150VDC Metric Sharft (A)		
R7500	500 Ohms	R7514	250 kOhm
R7502	1 kOhm	R7516	500 kOhm
R7504	5 kOhm	R7518	1 MOhm
R7506	10 kOhm	R7520	2 MOhm
R7508	25 kOhm		
R7510	50 kOhm		
R7512	100 kOhm		

$3.38

24mm SINGLE GANG LOGARITHMIC POTENTIOMETERS

Part No	Description
	0.25W 250CDC Metric Shaft (A)
	Uses 8mm dia. panel mounting holes, includes nuts and washers. Resistance: 10K
R6820	10 kOhm SG/Log
R6823	50 kOhm SG/Log
R6824	100 kOhm SG/Log

$2.68

10mm VERTICAL MOUNT HORIZONTAL ADJUST

Part No	Description		
	250mW 250VDC		
R1956	100 Ohm	R1966	200k Ohm
R1957	200 Ohm	R1967	500k Ohm
R1958	500 Ohm	R1968	1M Ohm
R1959	1k Ohm	R1969	2M Ohm
R1960	2k Ohm		
R1964	50k Ohm		

.50c

16mm DOUBLE GANG LINEAR POTENTIOMETERS

Part No	Description
	125mW 200VDC Metric Sharft (B)
R7659	50 kOhm
R7661	100 kOhm

$5.93

	60W 150VDC Metric Sharft (A)
R7606	Pot 16mm 10 kOhm
R7610	Pot 16mm 50 kOhm

$5.58

24mm DOUBLE GANG LINEAR POTENTIOMETERS

Part No	Description
	0.25W 350VDC Metric Sharft (B)
R6834	10 kOhm
R6836	20 kOhm
R6839	50 kOhm
R6840	100 kOhm

$5.64

	0.125W 250VDC Metric shaft (A)
	Uses 8mm dia. panel mounting holes, includes nuts and washers. Resistance: 10K
R6853	50 kOhm DG/Log

$5.64

5mm HORIZONTAL MOUNT VERTICAL ADJUST TRIMPOTS

Part No	Description		
	100mW 100VDC		
R1760	100R	R1777	100k
R1761	200R	R1779	200k
R1763	500R	R1781	470k
R1765	1k	R1783	1M
R1767	2k	R1784	2M
R1769	5k		
R1773	20k		
R1775	50k		

.48c

3W WIRE WOUND LINEAR POTENTIOMETERS

Part No	Description		
	3W 500VDC 0.25" Shaft		
	Aust Made		
R6901	5R	R6915	1k
R6903	10R	R6917	2k
R6905	25R	R6921	5k
R6907	50R	R6925	10k
R6909	100R		
R6911	200R		
R6913	500R		

$11.93

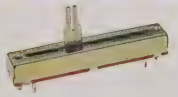
R 6923 7k5 $5

19mm 10 TURN TRIMPOTS

Part No	Description
	75mW 100VDC
	As used in alarge variety of test gear, precision instruments, etc. Quality trimpots with 10 turns from end to end.
R1900	PCB Mount 1k
R1901	PCB Mount 10k
R1902	PCB Mount 20k
R1903	PCB Mount 50k
R1904	PCB Mount 5k
R1905	PCB Mount 100k

$1.78

SLIDE POTENTIOMETERS



Part No	Description
R1980	Quality 50k ohm linear pot. it's 73mm long with 45mm travel.

$3.93

DICK SMITH ELECTRONICS That's where you go!

0.6W Metal Film Resistors - Packs of 5

These handy packs contain five fixed value metral film precision1% resistors are an ideal replacement for traditional 5% and 10% types. They incorporate a special flameproof lacquer coating to resistant solvent damage whilst ensuring compliance with UL-1412. Suitable for operation from -55 degrees C with a temperature coeffiient of +/-50ppm/ °C

Power Rating: 0.6w (70 deg. C Ambient Temperature)
Tolerance: +/- 1%
Temperature Coefficient: +/- 50 ppm

Max Working Voltage: 300 vrms (V max)
Dielectric Withstanding Voltage: 500Vrms
Insulation Resistance: 1,000 Ohm (100 VDC)

Value	ITM	Value	ITM	Value	ITM	Value	ITM	Value	ITM	Value	ITM
0	R0100	9.1	R0130	160	R0160	3k	R0190	51k	R0220	910k	R0250
0.1	R0101	10	R0131	180	R0161	3.3k	R0191	56k	R0221	1M	R0251
0.2	R0102	11	R0132	200	R0162	3.6k	R0192	62k	R0222	1.2M	R0252
0.3	R0103	12	R0133	220	R0163	3.9k	R0193	68k	R0223	1.3M	R0253
0.5	R0104	13	R0134	240	R0164	4.3k	R0194	75k	R0224	1.5M	R0254
0.6	R0105	15	R0135	270	R0165	4.7k	R0195	82k	R0225	1.6M	R0255
0.8	R0106	16	R0136	300	R0166	5.1k	R0196	91k	R0226	1.8M	R0256
1	R0107	18	R0137	330	R0167	5.6k	R0197	100k	R0227	2M	R0257
1.1	R0108	20	R0138	360	R0168	6.2k	R0198	110k	R0228	2.2M	R0258
1.2	R0109	22	R0139	390	R0169	6.8k	R0199	120k	R0229	2.4M	R0259
1.3	R0110	24	R0140	430	R0170	7.5k	R0200	130k	R0230	2.7M	R0260
1.5	R0111	27	R0141	470	R0171	8.2k	R0201	150k	R0231	3M	R0261
1.6	R0112	30	R0142	510	R0172	9.1k	R0202	160k	R0232	3.3M	R0262
1.8	R0113	33	R0143	560	R0173	10k	R0203	180k	R0233	3.6M	R0263
2	R0114	36	R0144	620	R0174	11k	R0204	200k	R0234	3.9M	R0264
2.2	R0115	39	R0145	680	R0175	12k	R0205	220k	R0235	4.3M	R0265
2.4	R0116	43	R0146	750	R0176	13k	R0206	240k	R0236	4.7M	R0266
2.7	R0117	47	R0147	820	R0177	15k	R0207	270k	R0237	5.1M	R0267
3	R0118	51	R0148	910	R0178	16k	R0208	300k	R0238	5.6M	R0268
3.3	R0119	56	R0149	1k	R0179	18k	R0209	330k	R0239	6.2M	R0269
3.6	R0120	62	R0150	1.1k	R0180	20k	R0210	360k	R0240	6.8M	R0270
3.9	R0121	68	R0151	1.2k	R0181	22k	R0211	390k	R0241	7.5M	R0271
4.3	R0122	75	R0152	1.3k	R0182	24k	R0212	430k	R0242	8.2M	R0272
4.7	R0123	82	R0153	1.5k	R0183	27k	R0213	470k	R0243	9.1M	R0273
5.1	R0124	91	R0154	1.6k	R0184	30k	R0214	510k	R0244	10M	R0274
5.6	R0125	100	R0155	1.8k	R0185	33k	R0215	560k	R0245		
6.2	R0126	110	R0156	2k	R0186	36k	R0216	620k	R0246		
6.8	R0127	120	R0157	2.2k	R0187	39k	R0217	680k	R0247		
7.5	R0128	130	R0158	2.4k	R0188	43k	R0218	750k	R0248		
8.2	R0129	150	R0159	2.7k	R0189	47k	R0219	820k	R0249		

28c per pack of 5

1W Carbon Film Resistors

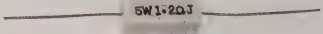
5% tolerance carbon film resistors in E12 series preferred values. Maximum working voltage 400V

Value	Cat No.	Value	Cat No.	Value	Cat No.	Value	Cat No.	Value	Cat No.	Value	Cat No.
1.0	R1402	18	R1432	330	R1462	5.6k	R1492	100k	R1524	1.8M	R1554
1.2	R1404	22	R1434	390	R1464	6.8k	R1494	120k	R1526	2.2M	R1556
1.5	R1406	27	R1436	470	R1466	8.2k	R1496	150k	R1528	2.7M	R1558
1.8	R1408	33	R1438	560	R1468	10k	R1498	180k	R1530	3.3M	R1560
2.2	R1410	39	R1440	680	R1470	12k	R1500	220k	R1532	2.9M	R1562
2.7	R1412	47	R1442	820	R1472	15k	R1502	270k	R1534	4.7M	R1564
3.3	R1414	56	R1444	1k	R1474	18k	R1504	330k	R1536	5.6M	R1566
3.9	R1416	68	R1446	1.2k	R1476	22k	R1506	390k	R1538	6.8M	R1568
4.7	R1418	82	R1448	1.5k	R1478	27k	R1508	470k	R1540	8.2M	R1570
5.6	R1420	100	R1450	1.8k	R1480	33k	R1512	560k	R1542	10M	R1572
6.8	R1422	120	R1452	2.2k	R1482	39k	R1514	680k	R1544		
8.2	R1424	150	R1454	2.7k	R1484	47k	R1516	820k	R1546		
10	R1426	180	R1456	3.3k	R1486	56k	R1518	1M	R1548		
12	R1428	220	R1458	3.9k	R1488	68k	R1520	1.2M	R1550		
15	R1430	270	R1460	4.7k	R1490	82k	R1522	1.5M	R1552		

18c each

5W Ceremic/Cement Resistors

5% tolerance ceremic/cement former maximum working voltage 350V



Value	Cat No.	Value	Cat No.	Value	Cat No.	Value	Cat No.	Value	Cat No.	Value	Cat No.
0.68	R1599	3.3	R1614	18	R1632	82	R1648	390	R1664	1.5k	R1678
0.1	R1600	4.7	R1618	22	R1634	100	R1650	470	R1666	1.8k	R1680
0.47	R1601	5.6	R1620	27	R1636	120	R1652	510	R1667	2.0k	R1681
1.0	R1602	6.8	R1622	33	R1638	150	R1654	560	R1668	2.2k	R1682
0.22	R1603	8.2	R1624	39	R1640	180	R1656	680	R1670	2.7k	R1684
1.2	R1604	10	R1626	47	R1642	220	R1658	820	R1672	3.3k	R1686
1.5	R1606	12	R1628	56	R1644	270	R1660	1.0k	R1674	3.9k	R1688
2.2	R1610	15	R1630	68	R1646	330	R1662	1.2k	R1676	4.7k	R1689

44c each

Electrolytic Capacitors – Radial (RB)

Value in µF	Volt.	Cat.No.	Price	Value in µF	Volt.	Cat.No.	Price	Value in µF	Volt.	Cat.No.	Price
0.47	50	R4290	$0.44	33	35	R4340	$0.53	470	25	R4420	$1.04
0.47	100	R4292	$0.38	47	25	R4350	$0.48	470	63	R4422	$1.58
1.0	50	R4295	$0.44	47.0	63	R4355	$0.48	680	16	R4435	$0.94
1.0	100	R4297	$0.38	100	16	R4360	$0.48	1000	16	R4440	$0.94
2.2	100	R4302	$0.38	100	25	R4370	$0.48	1000	25	R4450	$1.04
4.7	80	R4312	$0.38	100	63	R4372	$1.04	1000	63	R4458	$2.34
10	25	R4315	$0.38	220	16	R4380	$0.66	2200	16	R4459	$1.08
10	63	R4317	$0.38	220	25	R 4390	$0.77	2200	25	R4460	$1.28
22	25	R4319	$0.38	220	63	R4392	$0.98	2200	63	R4461	$9.98
22.0	35	R4320	$0.44	330	25	R4400	$1.04	5600	40	R4475	$7.94
22.0	50	R4321	$0.38	470	10	R4407	$0.58	6800	10	R4470	$3.94
33	16	R4335	$0.33	470	16	R4410	$0.83	10000	10	R4480	$3.94

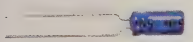
Electrolytic Capacitors – Axial (RT)

Value in µF	Volt.	Cat.No.	Price	Value in µF	Volt.	Cat.No.	Price	Value in µF	Volt.	Cat.No.	Price
1.0	350	R4015	$1.24	33	16	R4095	$0.74	1000	16	R4175	$1.94
2.2	63	R4020	$1.24	47	25	R4110	$0.74	1000	25	R4180	$2.08
3.3	25	R4025	$0.54	100	10	R4125	$0.74	1000	35	R4185	$2.94
10	63	R4065	$0.74	100	63	R4135	$1.14	1000	63	R4190	$1.98
10	80	R4068	$0.74	220	16	R4145	$0.78	2200	16	R4196	$2.48
22	25	R4086	$0.74	220	25	R4150	$0.78	2200	35	R4206	$1.98
22	63	R4091	$0.74	470	63	R4165	$1.84	2200	50	R4211	$5.18

Tantalums Capacitors

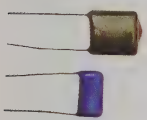
Val. in µF	Volt.	Cat.No.	Price	Val. in µF	Volt.	Cat.No.	Price	Val. in µF	Volt.	Cat.No.	Price
0.1	35	R4700	$0.77	1.0	35	R4720	$0.77	10	25	R4750	$1.98
0.22	35	R4705	$0.77	2.2	35	R4730	$0.94	22	16	R4760	$1.34
0.33	35	R4710	$0.77	3.3	35	R4735	$0.77	33	10	R4765	$1.44
0.47	35	R4715	$0.77	4.7	35	R4740	$0.98	33	16	R4766	$2.14
0.68	35	R4717	$0.77	6.8	35	R4745	$1.48	47	6.3	R4770	$2.44
								100	3	R4775	$2.44

Bipolar Electrolytics (BP or NP) Capacitors



Val. in µF	Volt.	Cat.No.	Price	Val. in µF	Volt.	Cat.No.	Price	Val. in µF	Volt.	Cat.No.	Price
2.2	50	R4600	$0.66	4.7	50	R4610	$0.66	10	50	R4630	$0.83
3.3	50	R4605	$0.66	6.8	50	R4620	$0.95	22	50	R4640	$1.08
								47	50	R4650	$1.54

100V DC Metallised Polyester Film Capacitors – Greencaps

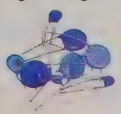


Val. in µF	Volt.	Cat.No.	Price	Val. in µF	Volt.	Cat.No.	Price	Val. in µF	Volt.	Cat.No.	Price
0.0012	100	R2012	$0.32	0.01	100	R2055	$0.52	0.1	100	R2100	$0.74
0.0015	100	R2015	$0.32	0.012	100	R2057	$0.42	0.12	100	R2102	$0.52
0.0018	100	R2018	$0.32	0.015	100	R2060	$0.52	0.15	100	R2105	$0.72
0.0022	100	R2020	$0.32	0.018	100	R2062	$0.32	0.22	100	R2110	$0.92
0.0033	100	R2025	$0.52	0.022	100	R2065	$0.52	0.27	100	R2115	$0.72
0.0027	100	R2027	$0.32	0.027	100	R2067	$0.32	0.33	100	R2120	$0.72
0.0039	100	R2030	$0.32	0.033	100	R2070	$0.52	0.39	100	R2125	$0.72
0.0047	100	R2035	$0.52	0.039	100	R2075	$0.32	1.0	100	R2135	$2.24
0.0056	100	R2040	$0.32	0.056	100	R2085	$0.32	2.0	100	R2140	$2.24
0.0068	100	R2045	$0.32	0.068	100	R2090	$0.32	3.3	100	R2145	$1.44
0.0082	100	R2050	$0.32	0.082	100	R2095	$0.32				

Ceramic Capacitors

Value	Volt.	Cat.No.	Price	Value	Volt.	Cat.No.	Price	Value	Volt.	Cat.No.	Price
1pF	50	R2215	$0.18	33pF	50	R2247	$0.18	680pF	50	R2303	$0.18
1.5pF	50	R2217	$0.18	39pF	50	R2249	$0.18	820pF	50	R2305	$0.18
2.2pF	50	R2219	$0.18	47pF	50	R2251	$0.18	0.001µF	50	R2307	$0.18
2.7pF	50	R2221	$0.18	56pF	50		$0.18	0.0022µF	50	R2309	$0.18
3.3pF	50	R2223	$0.18	68pF	50	R2257	$0.18	0.0033µF	50	R2311	$0.18
3.9pF	50	R2225	$0.18	82pF	50	R2259	$0.18	0.0047µF	50	R2313	$0.18
4.7pF	50	R2227	$0.18	100pF	50	R2285	$0.18	0.0056µF	50	R2315	$0.18
5.6pF	50	R2229	$0.18	120pF	50	R2287	$0.18	0.0068µF	50	R2317	$0.18
6.8pF	50	R2231	$0.18	150pF	50	R2289	$0.18	0.0082µF	50	R2319	$0.18
8.2pF	50	R2233	$0.18	180pF	50	R2291	$0.18	0.01µF	50	R2321	$0.18
10pF	50	R2235	$0.18	220pF	50	R2293	$0.18	0.022µF	50	R2323	$0.18
12pF	50	R2237	$0.18	270pF	50	R2295	$0.18	0.033µF	50	R2325	$0.18
15pF	50	R2239	$0.18	330pF	50	R2296	$0.18	0.047µF	50	R2327	$0.18
18pF	50	R2241	$0.18	390pF	50	R2297	$0.18	0.1µF	50	R2360	$0.18
22pF	50	R2243	$0.18	470pF	50	R2299	$0.18	0.22µF	25	R2370	$0.18
27pF	50	R2245	$0.18	560pF	50	R2301	$0.18				

High Voltage Disc Ceramics Capacitors



Value	Volt.	Cat.No.	Price	Value	Volt.	Cat.No.	Price	Value	Volt.	Cat.No.	Price
100pF	3kv	R2375	$1.94	390pF	3kv	R2384	$1.94	0.0033µF	3kv	R2393	$2.44
120pF	3kv	R2376	$1.94	470pF	3kv	R2386	$1.94	0.0047µF	3kv	R2394	$2.44
150pF	3kv	R2378	$1.94	560pF	3kv	R2387	$1.94	0.0056µF	3kv	R2395	$2.94
180pF	3kv	R2380	$1.94	680pF	3kv	R2388	$1.94	0.0068µF	3kv	R2396	$2.94
220pF	3kv	R2381	$1.94	820pF	3kv	R2389	$1.94	0.0082µF	3kv	R2398	$2.94
270pF	3kv	R2382	$1.94	0.001µF	3kv	R2390	$2.44	0.01µF	3kv	R2400	$2.34
320pF	3kv	R2383	$1.94	0.0022µF	3kv	R2392	$2.44				

DICK SMITH ELECTRONICS That's where you go!

MONOLYTHIC CAPACTIORS - 5mm Leg Spacing

R1981	50V	NPO	10pF	$0.38	R1998	50V	X7R	2200pF	$0.38
R1982	50V	NPO	15pF	$0.38	R1999	50V	X7R	3300pF	$0.38
R1983	50V	NPO	22pF	$0.38	R2000	50V	X7R	0.01uF	$0.38
R1984	50V	NPO	33pF	$0.38	R2002	50V	X7R	4700pF	$0.38
R1985	50V	NPO	47pF	$0.38	R2003	50V	X7R	6800pF	$0.38
R1986	50V	NPO	68pF	$0.38	R2004	50V	X7R	0.015uF	$0.38
R1987	50V	NPO	100pF	$0.38	R2005	50V	X7R	0.022uF	$0.38
R1988	50V	NPO	120pF	$0.38	R2006	50V	X7R	0.033uF	$0.38
R1989	50V	NPO	150pF	$0.38	R2007	50V	X7R	0.047uF	$0.38
R1990	50V	NPO	220pF	$0.38	R2008	50V	X7R	0.068uF	$0.38
R1991	50V	NPO	330pF	$0.38	R2180	50V	Z5U	0.15uF	$0.38
R1994	50V	NPO	470pF	$0.38	R2182	50V	Z5U	0.33uF	$0.38
R1995	50V	NPO	680pF	$0.38	R2185	25V	Z5U	1.0uF	$0.38
R1997	50V	X7R	1500pF	$0.38					

POLYSTYRENE CAPACITORS

R2780	63V		1000 pF	$0.50	R2823	250V		150 pF	$0.50
R2807	250V		33 pF	$0.50	R2825	250V		180 pF	$0.50
R2809	250V		39 pF	$0.50	R2827	250V		220 pF	$0.50
R2811	250V		47 pF	$0.50	R2829	250V		270 pF	$0.50
R2813	250V		56 pF	$0.50	R2831	250V		330 pF	$0.50
R2815	250V		68 pF	$0.50	R2833	250V		390 pF	$0.50
R2817	250V		82 pF	$0.50	R2837	250V		560 pF	$0.50
R2819	250V		100pF	$0.50	R2839	250V		680 pF	$0.50
R2821	250V		120 pF	$0.50	R2841	250V		820 pF	$0.50

275V AC MAINS SUPRESSION CAPACITORS

R2620	DX2	0.01 uF	$0.98
R2622	DX2	0.022 uF	$0.98
R2624	DX2	0.033 uF	$0.98
R2626	DX2	0.047 uF	$0.98
R2628	DX2	0.1 uF	$0.98
R2629	DX2	0.15 uF	$1.28
R2630	DX2	0.22 uF	$1.68
R2632	DX2	0.33 uF	$1.98
R2634	DX2	0.47 uF	$2.93
R2640	Y-Class	0.0047 uF	$3

SPECIALISED CAPACITORS

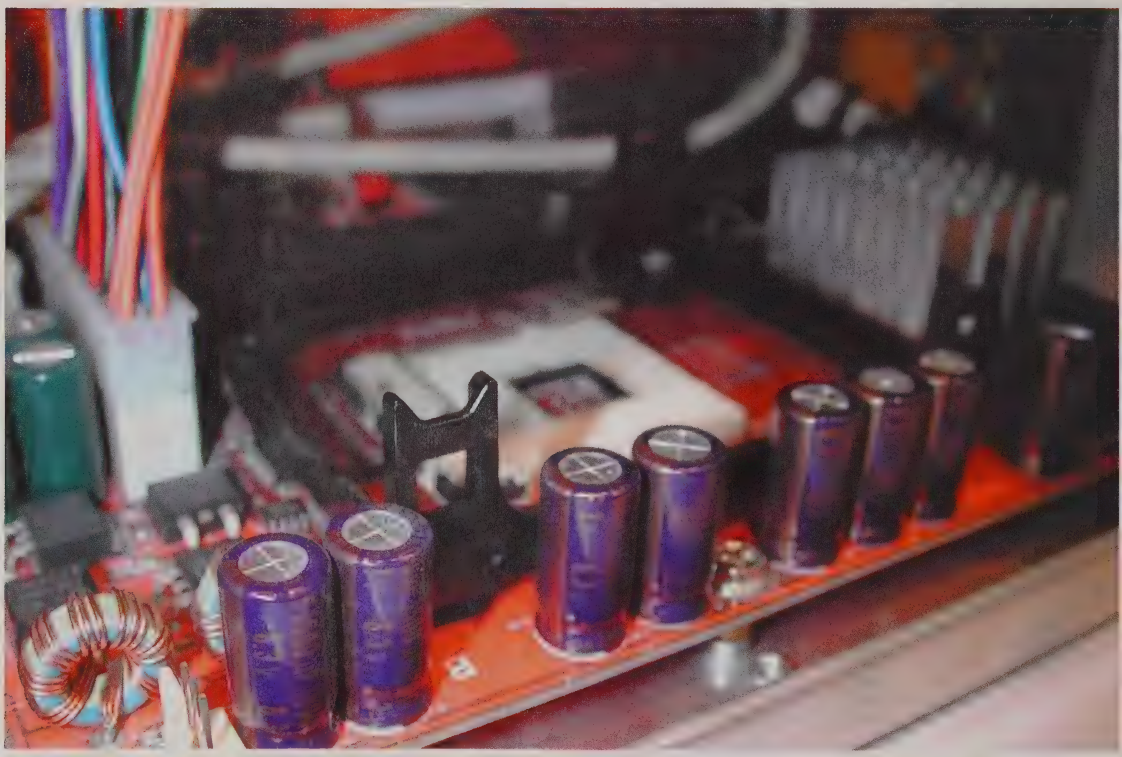
R2930	Cap Trimmer 9.8pF-60pF (Brown)	$1.64
R2970	Cap 60pF-160pF Mini Tuning Cap	$4.18

THERMISTORS

R1890	Thermistor -20/+125'C 100k NTC	$3.98
R1895	Thermistor -30/+125'C 100k NTC	$1.14

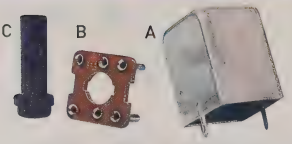
VARISTORS

R1802	Varistor TNR15G431K/V275LA20A	$1.78

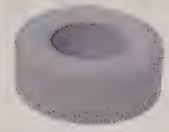


COMPONENTS

Aerial Rod with Coil
Ferrite Rod with prewound B/C coil. Used in pocket radios, Funway 1&2 etc.
R5100 **$3.08**



Tinned Copper Screening CAN
- R5000 CAN 7100 12.7(w) x 13.4(d) x 17.8(h)mm. **$0.90**
- R5010 Former Base 6 Pin **$1**
- R5020 Former suit 4mm Ferrite Core **$1.93**



Iron Powder Toroid
Enamel Coated, AL = 45nH (approx) 14.8mm (OD) x 8mm (ID) x 6.35mm (H). Suit EMI Suppression as choke in TRIAC circuits. R5410 **$2.53**

Aerial Rod
R5106 Aerial Ferrite Rod 180 x 10mm **$3.40**
R5107 Aerial Ferrite Rod 100 x 10mm **$1.93**

Ferrite Bead - 6-Hole
F14 Material - For HF/VHF, Suppression. 6mm (OD) x 10mm (ID) x 0.9mm Holes (x 6). R5430 **$1.63**

4mm Ferrite Cores Pack of 4
10mm(long) x 4mm (diam), 0.5mm thread pitch.
R5025 Ferrite Screw Cores Pk 4 F16 **$2.93**
R5030 Ferrite Screw Cores Pk 4 F29 **$2.93**

Slug Tuned IF/OSC Coil Pack
Set comprises of 1st, 2nd & 3rd 455kHz standard miniature IF transformers and b/c oscillator coil.
R5040 PK 4 **$1.68**

COMPONENT PACKS

Carbon Film Resistors - 300 piece 1/4W Pack
Computer selected. 50 assorted values for maximum versiatility. 5% tolerance.
R7010 **$8.94**

Resistors - Assorted Packs
In a selected value range

Pack	Value Range	Pieces	Cat.No.
Pack A	0-8.2 Ohms	130	R 7100
Pack B	10-82 Ohms	120	R 7102
Pack C	100-820 Ohms	120	R 7104
Pack D	1k-8.2 kOhms	120	R 7106
Pack E	10k-82 kOhms	120	R 7108
Pack F	100k-820 kOhms	120	R 7110
Pack G	1M-10 MOhms	130	R 7112

$4.93 ea

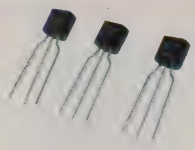
Capacitors - 60 piece Ceramic 50v Pack
Quality 50V Ceramic Capacitors in specially selected common values. 1.5pt to 0.0056uF
R7050 **$6.94**

Capacitors - 50 piece Monolythic Pack
Ceramic pack high stability 0.1uF, 50V. Commonly used in by-pass and coupling circuits.
R7062 **$8.46**

Capacitors - 65 piece MKT Polyester 100wv/63wv Pack
5% 100WV MKT Capacitors with 5.08mm Leg Spacing. 5% 0.001uF to 0.47uF.
R7070 **$14.94**

Capacitors - 10v - 25v 55 piece Electrolytic Pack
Quality single-ended (RB) electrolytics 2.2uF to 470uF
R7030 **$14.94**

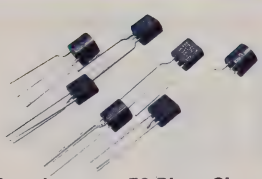
DICK SMITH ELECTRONICS That's where you go!



Semiconductors - 100 Piece Signal Transistors Pack

Each pack contains: 20 of each BC547, BC548, BC549, 15 of each BC557 and BC558 and 10 x BC559. Z3000

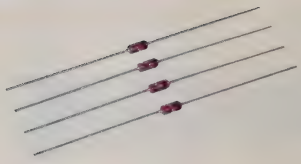
$16.74



Semiconductors - 50 Piece Signal Transistors Pack

1/2 size pack consisting of: 11 of each BC547, BC548, BC549, 6 of each BC557 and BC558 and 5 x BC559. Z3002

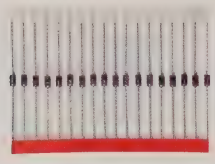
$9.84



Semiconductors - 100 Piece Signal Diode Pack

100 Piece Pack 1N4148 SS Diodes
Z3006

$4.98



Semiconductors - 100 piece Rectifier Pack

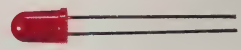
400v, 1N4004 1A rectifier diodes in a convenient 100-piece pack for the workshop or laboratory. Z3008

$8.98

50 Piece 3mm Red LED Pack

High efficiency 3mm Round LEDs. Diffused lens, with consistent output, colour, shape and size. Electrical rating: 2.1v @20mA, Intensity: 2mcd. Z3009

$12.22



50 Piece Red LED Pack (Diffused Red)

High efficiency 5mm round LED's with consistent colour and illumination. Diffused Red, Forward Voltage: 2.1VDC, Intensity: 3mcd, Forward Current: 15mA, Viewing Angle: 40 degrees. Z3011

$13.66

Semiconductors - 50 Piece 1N4004 Rectifier Diode Pack

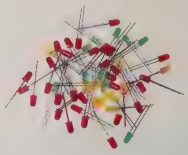
400V 1A Rectifier Diodes in a bulk pack for more savings.
Z3012

$5.98

Assorted 5mm LEDS - 100 Piece Mixed Colour Pack

Each pack contains: 60 x Red, 20 x Green, 10 x Yellow and 10 x Orange.
Z3015

$27.98



50 Piece 5mm Mixed Colour LED Pack

Quality 5mm LEDs in a value pack. Contains 30x Red, 10x Green, 5x Yellow, 5x Orange. Intensity- Red: 3mcd, Green: 10mcd, Orange: 10mcd, Yellow: 8mcd.
Z3018

$14.88

50 Piece 3mm Mixed Colour LED Pack

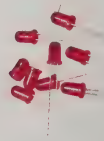
High efficiency 3mm round LED's. Each pack contains 30x Red, 10x Green, 5x Yellow, 5x Orange. Luminous Intensity- Red: 2mcd, Green: 6mcd, Yellow: 5mcd, Orange: 5mcd.
Z3019

$12.77

100 Piece Red LED Pack (Diffused Red)

High efficiency quality 5mm LEDs with consistent colour and illumination.
Z4084

$24.74



50 Piece Red LED Pack

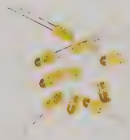
Pack 50 5mm LED Transparnt RED.
Z7060

$12.96

50 Piece Green LED Pack

Pack 50 5mm LED Transparnt GRN.
Z7064

$12.96



50 Piece Yellow LED Pack

Pack 50 5mm LED Transparnt YLW.
Z7068

$12.96

Surface Mount LEDs - 50 Piece Mixed Colour Pack

Pack 50 Mixed Colour SMD LEDs.
Z7100

$16.20

BIPOLAR TRANSISTORS

Part	Cat #	Price	Case Style	Polarity	VCE	VCB	IC (mA)	Hfe	BIAS	Dissipation @ 25°C (mW)
2N2222A	Z2069	$0.44	TO18	NPN	40	75	800	100-300	150	500
2N3019	Z2068	$2.00	TO39	NPN	80	140	1000	50-100	500	800
2N3055	Z1804	$2.08	TO3	NPN	60	70	15000	20-70	4000	115000
2N3904	Z2070	$0.46	TO92 (72)	NPN	40	60	200	100-300	10	310
2N5401	Z1900	$0.50	TO92 (72)	PNP	150	160	6000	60-240	10	625
2N5551	Z2076	$0.25	TO92 (72)	NPN	160	180	600	80-250	10	625
2SC1674	Z6005	$1.25	TO92 (74)	NPN	20	30	20	40-180	1	250
2SC710	Z2512	$0.60	TO92 (76)	NPN	25	30	30	90	1	200
BC327	Z2240	$0.38	TO92 VAR1	PNP	45	50	500	100-600	100	625
BC328	Z2242	$0.38	TO92 VAR1	PNP	25	30	500	100-600	100	625
BC337	Z2190	$0.38	TO92 VAR1	NPN	45	50	500	100-600	100	625
BC338	Z2252	$0.42	TO92 VAR1	NPN	25	30	500	100-600	100	625
BC546	Z1350	$0.32	TO92 VAR1	NPN	65	80	100	110-450	2	500
BC547	Z1300	$0.32	TO92 VAR1	NPN	45	50	100	110-800	2	500
BC548	Z1308	$0.32	TO92 VAR1	NPN	30	30	100	110-800	2	500
BC549	Z1319	$0.30	TO92 VAR1	NPN	30	30	100	200-800	2	500
BC556	Z1352	$0.44	TO92 VAR1	PNP	65	80	100	75-475	2	500
BC557	Z1340	$0.32	TO92 VAR1	PNP	45	50	100	75-800	2	500
BC558	Z1348	$0.32	TO92 VAR1	PNP	30	30	100	75-800	2	500
BC559	Z1359	$0.38	TO92 VAR1	PNP	30	30	100	125-800	2	500
BC639	Z1388	$0.77	TO92 (74)	NPN	80	100	1000	40-250	150	1000
BC640	Z1389	$0.77	TO92 (74)	PNP	80	100	1000	40-250	150	1000
BD139	Z1443	$1.08	TO126	NPN	80	100	1500	40-250	150	8000
BD140	Z1444	$1.08	TO126	PNP	80	100	1500	40-250	150	8000
BD681	Z1462	$2.38	TO126	NPN	100	100	4000	750	1500	40000
BD682	Z1460	$2.38	TO126	PNP	100	100	4000	750	1500	40000
BF469	Z1635	$1.35	TO126	NPN	250	250	50	50	25	1800
BF470	Z1636	$1.35	TO126	PNP	250	250	50	50	25	1800
BUX80	Z2150	$4.80	TO3	NPN	400	800	10000	30	1200	100000
MJ10012	Z1805	$13.48	TO3	NPN	400	600	10000	100-2000	6000	175000
MJ15003	Z1808	$8.50	TO3	NPN	140	140	20000	25-150	5000	250000
MJ15004	Z1810	$10.70	TO3	PNP	140	140	20000	25-150	5000	250000
MJ2955	Z1800	$2.98	TO3	PNP	60	70	15000	20-70	4000	115000
MJE2955T	Z2005	$2.47	TO220	PNP	60	70	10000	20-100	4000	75000
MJE3055T	Z2008	$2.47	TO220	NPN	60	70	10000	20-100	4000	75000
MPSA06	Z2080	$0.25	TO92 (72)	NPN	80	80	500	100	10	625
MPSA14	Z2086	$0.77	TO92 (72)	NPN	30	30	500	20000	100	625
MPSA63	Z2084	$0.25	TO92 (72)	PNP	30	30	1200	5000	10	625
MPSA65	Z2088	$0.70	TO92 (72)	PNP	30	30	500	20000	100	625
PN2907	Z2065	$0.55	TO92 (72)	PNP	40	60	600	100-300	150	625
PN3563	Z2180	$0.80	TO92 (72)	NPN	15	30	50	20-200	8	350
PN4258	Z2326	$0.35	TO92 (77)	PNP	12	12	200	30-120	10	350
TIP31B/C	Z2020	$2.66	TOP66	NPN	80	80	3000	25	1000	40000
TIP32B/C	Z2024	$2.66	TOP66	PNP	80	80	3000	25	1000	40000

FETs

Cat #	Part #	Price	Case	Type	$V_{(BR)GSS}$ V	@	I_G mA	V_{GS} (off) min V	V_{GS} (off) max V	@	V_{DS} V	I_D nA
Z1832	MPF102	$2.18	TO-92 (72)	N Channel	-25		1		-8		15	2
Z2342	2N5457	$2.40	TO-92 (72)	N Channel	-25		10	-0.5	-6		15	10

POWER FETs

Cat #	Part #	Price	Case	Type	V_{DSS} V	P_{tot} W	I_D max A	V_{GS} min V	V_{GS} max V	G_{fs} m mhos	C_{ISS} A	R_{DS} ohm
Z1853	MTP60N06	$9.98	TO-220	N Channel	60	150	60	2.0	4.0	20k	1950	0.014
Z1855	MTP6N60E	$9.98	TO-220	N Channel	600	125	6.5	3.0	4.0	5M	1500.0	1.2
Z1880	IRF512	$2.56	TO-220	N Channel	100	20	4	2.0	4.0	1M	30.0	0.8
Z1870	IRFP450	$9.98	TO-247	N Channel	500	180	14	2.0	4.0	14M	2700.0	0.4
Z2132	MTP3055E	$2.38	TO-220	N Channel	60	40	12	2.0	4.5	4M	500.0	0.45

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SIGNAL DIODES

Cat No	Part No	Type	Case	V_R V	I_F mA	C_D pF	V_F v	@	I_F mA	I_R µA	@	V_R v	Price
Z3040	1N60	Germanium	DO-7	40	30	1	1		10	0.025		20	$0.88
Z3232	OA47	Germanium	DO-7	25	110	3.5	0.45		1	0.2		50	$1.50
Z3120	1N4148	Silicon	DO-35	75	200	4	1		5	200		10	$0.54
Z3231	1N5711	Silicon Schottky	DO-35	70	0.01	2	0.41		10	100		25	$1.46

STANDARD RECTIFIER DIODES

Cat No	Part No	Case	V_R V	I_F A	I_{FSM} A	V_F v	@	I_F mA	I_R µA	@	V_R v	Price
Z3204	1N4004	DO-7	400	1	30	1.1		1	5		400	$0.58
Z3207	1N4007	DO-7	1000	1	30	1.1		1	5		1000	$0.88
Z3222	1N5404	DO-35	400	3	200	1.1		3	5		400	$0.44
Z3228	1N5408	DO-35	1000	3	200	1.1		3	5		1000	$0.28
Z3229	6A10	DO-35	1000	6	350	1		6	10		1000	$2.16
Z3243	BYX98	DO-35	600	10	75	0.4		10	200		60	$10.20

BRIDGE RECTIFIERS

Cat No	Part No	Case Format	V_R V	I_F A	V_F V (per leg)	@	I_F A	I_R µA	@	V_R V	Price
Z3300	DB1556	PCB Mount, Square Pattern	600	1.5	1.1		1	10		600	$1.35
Z3304	W04	PCB Mount, Square Pattern	400	1.5	1.1		1	10		400	$0.68
Z3306	P04	PCB Mount, Square Pattern	400	6	1.3		6	10		400	$1.78
Z3308	2W06	PCB Mount, Square Pattern (WOG)	600	2	1		1	10		600	$1.66
Z3310	KBL10/407	PCB Mount, SIL	1000	4	1.1		2	10		1000	$4.95
Z3333	KBLC804	Square Pattern (D-72)	70	8	1		4	10		400	$5.34
Z3335	KBPC2508	Terminal Lugs	70	25	0.2		12.5	10		400	$10.96
Z3336	KBPC3504	Terminal Lugs	70	35	0.2		17.5	10		400	$10.44
Z3350	FB5006	Terminal Lugs	70	50	0.2		25	100		600	$22.60

1W ZENER DIODES

Cat No	Voltage	Max. Regulator Current* (mA)	Part No	Price
Z3515	3V3	276	1N4728/BZX85C3V3	$0.48
Z3519	3V9	234	1N4730/BZX85C3V9	$0.48
Z3523	4V7	193	1N4732/BZX85C4V7	$0.48
Z3525	5V1	178	1N4733/BZX85C5V1	$0.48
Z3527	5V6	162	1N4734/BZX85C5V6	$0.48
Z3531	6V8	133	1N4736/BZX85C6V8	$0.48
Z3533	7V5	121	1N4737/BZX85C7V5	$0.48
Z3535	8V2	110	1N4738/BZX85C8V2	$0.48
Z3537	9V1	100	1N4739/BZX85C9V1	$0.48
Z3539	10V	91	1N4740/BZX85C5V1	$0.48
Z3543	12V	76	1N4742/BZX85C10	$0.48
Z3547	15V	61	1N4744/BZX85C15	$0.48
Z3549	16V	57	1N4745/BZX85C16	$0.48
Z3551	18V	50	1N4746/BZX85C18	$0.48
Z3553	20V	45	1N4747/BZX85C20	$0.48
Z3557	24V	38	1N4749/BZX85C24	$0.48
Z3561	30V	30	1N4751/BZX85C30	$0.48
Z3563	33V	27	1N4752/BZX85C33	$0.48
Z3565	36V	25	1N4753A/BZX85C36	$0.48
Z3583	75V	12	1N4761A/BZX85C75	$0.48

* Valid providing the lads 10mm from the case are kept at a 25°C ambient temperature

ZENER DIODES-400mW

Cat No	Voltage	Max. Regulator Current* (mA)	Part No	Price
Z3401	3V3	110	1N746A/1N5226B	$0.44
Z3402	3V9	95	1N748A/1N5229B	$0.20
Z3403	4V7	75	1N750A/1N5230B	$0.44
Z3405	5V1	70	1N751A/1N5231B	$0.44
Z3407	5V6	65	1N752A/1N5232B	$0.44
Z3409	6V2	60	1N7536A/1N5234B	$0.40
Z3411	6V8	55	1N754A/1N5235B	$0.44
Z3413	10V	17	1N758A/1N5240B	$0.44
Z3414	8V2	45	1N756A/1N5237B	$0.44
Z3415	12V	30	1N759A/1N52426B	$0.46
Z3416	9V1	40	1N757A/1N5245B	$0.47
Z3417	15V	27	1N965A	$0.48
Z3427	27V	14	1N971A/B	$0.05

* Valid providing the lads 10mm from the case are kept at a 25°C ambient temperature

4000 SERIES CMOS

Supply voltages range from +3V to +18V

Cat No	Part No	Description	Pins	Price
Z5601	4001	Quadruple 2-input NOR gate	14	$0.84
Z5602	4002	Dual 4-Imput NOR gate	14	$0.88
Z5607	4007	Dual complementary pair & inverter	14	$0.98
Z5609	4009	HEX inverting buffers	16	$2.74
Z5611	4011	Quadruple 2-input NAND gate	14	$1.08
Z5612	4012	Dual 4-Imput NAND gate	14	$1
Z5613	4013	Dual D-type flip-flop	14	$0.98
Z5615	4015	Dual 4-bit static shift register	16	$1.58
Z5616	4016	Quadruple bilateral switches	14	$1.35
Z5617	4017	5-stage Johnson Decade counter	16	$1.08
Z5619	4019	Quadruple 2-input multiplexer	16	$1.75
Z5620	4020	4-stage binary counter	16	$1.58
Z5621	4021	8-bit static shift register	16	$1.58
Z5622	4022	4-stage divide-by-8 Johnson counter	16	$1.58
Z5623	4023	Triple 3-input NAND gate	14	$1.34
Z5624	4024	7-stage binary counter	14	$1.68
Z5625	4025	Triple 3-input NOR gate	14	$1.18
Z5627	4027	Dual JK flip-flop	16	$0.98
Z5629	4029	Synchronous up/down counter, binary/decade counter	14	$1.74
Z5630	4030	Quadruple exclusive-OR gate	14	$1.74
Z5640	4040	12-stage binary counter	16	$1.94
Z5644	4044	Quadruple R/S latch with 3-stage outputs	16	$1.80
Z5646	4046	Phase-locked loop	16	$1.78
Z5649	4049	HEX inverting buffers	16	$1.48
Z5650	4050	HEX non-inverting buffers	16	$1.48
Z5651	4051	8-channel analogue multiplexer/ demultiplexer	16	$2.18
Z5666	4066	Quadruple bilateral switches	14	$1.54
Z5668	4068	8-input NAND gate	14	$0.95
Z5669	4069	HEX inverter	14	$1.08
Z5673	4073	Triple 3-input AND gate	14	$1.33
Z5681	4081	Quadruple 2-input AND gate	14	$1.08
Z5682	4082	Dual 4-input AND gate	14	$1.45
Z5693	4093	Quadruple 2-input NAND Schmitt trigger	14	$1.08
Z5692	4094	8-stage shift-and-store bus register	16	$1.68
Z5694	40194	4-bit bidirectional universal shift register	16	$1
Z5695	40175	Quadruple D-type flip-flop	16	$0.95
Z5721	4501	Triple gate NAND-NOR-AND	16	$1
Z5730	4511	BCD to 7-segment latch/decoder/ driver	16	$2.64
Z5737	4514	Triple gate NAND-NOR-AND	24	$4.64
Z5738	4516	Binary up/down counter	16	$2.64
Z5740	4518	Dual BCD counter	16	$1.74
Z5742	4520	Binary counter	16	$2.64
Z5744	4526	Programmable 4-bit binary down counter	16	$0.95
Z5748	4528	Dual monostable multivibrator	16	$2.08
Z5758	4538	Dual precision monostable multivibrator	16	$2.63
Z5767	4584	Hex Schmitt Trigger	14	$2.16

74HC/74C CMOS SERIES

Supply voltages range from +2V to +6V

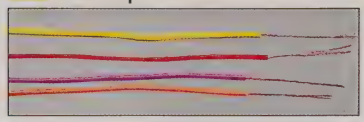
Cat No	Part No	Description	Pins	Price
Z5410	74C00	Quad 2-Input NAND gate	14	$0.50
Z5413	74C14/ 40106	Hex Schmitt Trigger	14	$2.24
Z5802	74HC02	Quad 2-Input NOR gate	14	$1.34
Z5804	74HC04	Hex Inverter	14	$1.34
Z5808	74HC08	Quad 2-Input AND Gate	14	$1.04
Z5811	74HC11	Triple 3-input AND gate	14	$0.95
Z5910	74HC123	Dual Retriggerable Monostable Multivibrator	16	$2.08
Z5920	74HC139	Dual 2 to 4 Decoder/Demultiplexer	16	$2.08
Z5814	74HC14	Hex Schmitt Inverter	14	$1.48
Z5925	74HC157	Quad 2-Input Multiplexer	16	$2.24
Z5929	74HC161	Synchronous Presettable 4-bit counter	16	$2.08
Z5935	74HC174	Hex D-type flip-flop with clear	16	$1.78
Z5939	74HC193	Synchronous up/down binary counter	16	$2.08
Z5940	74HC221	Dual Monostable multivibrator	16	$3.04
Z5945	74HC240	Inverted Octal Bus Buffer with 3-stage Outputs	20	$2.64
Z5955	74HC245	Non Inverting Octal Bus Transceiver 3-stage	20	$1.68
Z5827	74HC27	Triple 3-input NOR gate	14	$1.18
Z5830	74HC30	Hex D-type flip-flop with clear	14	$1.18
Z5932	74HC32	8-input NAND gate	16	$1.44
Z5960	74HC367	Non Inverting HEX bus buffer (3-state)	16	$2.08
Z5965	74HC373	Octal D-type transparent latch (3-state)	20	$3.34
Z5982	74HC595	8-bit Shift Register with output latches (3-state)	16	$3.28
Z5874	74HC74	Dual D-type flip-flop with preset and clear	14	$1.38
Z5885	74HC85	4-bit Magnitude Comparator	20	$2.08

74LS TTL SERIES

Supply voltages range from +5V

Cat No	Part No	Description	Pins	Price
Z4901	74LS01	Quad 2-Input Positive NAND gate	14	$0.98
Z4905	74LS05	Hex Inverters with Open-Collection Outputs	14	$0.94
Z4910	74LS10	Triple 3-Input NAND Gates	14	$1.38
Z4912	74LS11	Triple 3-Input AND Gates	14	$1.38
Z4913	74LS13	Dual 4-Input Schmitt Trigger	14	$0.50
Z5286	74LS153	Dual 4-Line to 1-line Data Selectors Multiplexers	16	$1.88
Z5193	74LS193	Synchronous 4-bit Up/Down Binary Counters with Dual Clock	16	$1.78
Z4920	74LS20	Dual 4-Input NAND Gates	14	$1.08
Z5296	74LS221	Dual Non-Retriggerable One-Shot with Clear and Complemenary Outputs	16	$1.58
Z4927	74LS27	Triple 3-Input NOr Gates	14	$1.08
Z4930	74LS30	8-Input NAND Gate	14	$1.34
Z5292	74LS367	Hex 3-State Buffers	16	$0.95
Z4954	74LS54	4-Wide 2-Input AND-OR-INVERT Gate	14	$0.25
Z4975	74LS75	Quad Latches	16	$2.64
Z4983	74LS83	4-Bit Binary Adders with Fast Carry	16	$0.85
Z4985	74LS85	4-Bit Magnitude Comparators	16	$1.98

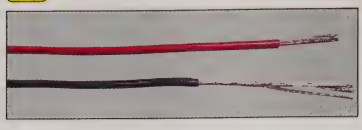
Flexible Light Duty Hook-Up Wire



Rating:	1A Nom.
Cross Sectional Area:	0.11mm²
Conductors:	10 x 0.12mm
Insulation:	PVC
W2220 Red	W2224 Yellow
W2221 Black	W2227 Purple
W2222 Brown	W2231 White
W2223 Orange	

.28¢ m

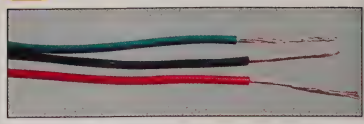
Medium Duty Hook-Up Wire



Rating:	4.5A Nom.
Cross Sectional Area:	0.49mm²
Conductors:	10 x 0.25mm
Insulation:	PVC
W2240 Red	
W2241 White	
W2242 Black	
W2243 Blue	
W2244 Yellow	

.38¢ m

Heavy Duty Hook-Up Wire



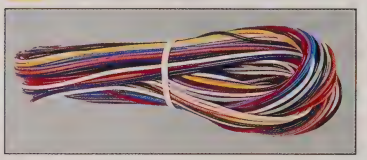
Rating:	7.5A
Conductors:	24 x 0.2mm
Cross Sectional Area:	0.75mm²
Insulation:	PVC

General use cable for requirements not exceeding 7.5amps.

W2260 Red
W2262 Black
W2264 Green/Grey

.48¢ m

Flexible Light Duty Hook-Up Wire - 12 Colour Pack

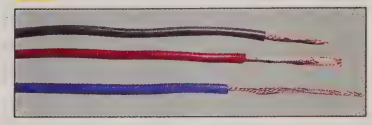


A handy pack of 12 x 2m lengths of different coloured light duty wire the same as W-2220 to W-2231. All are 10 x 0.12mm cable. Cross sectional area: 0.11mm2. Ideal for projects, hobbyists, etc.

W4010

$5.98 PK

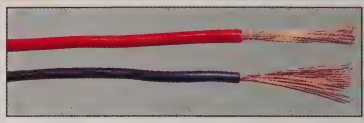
Very Heavy Duty Hook-Up Wire



Rating:	10A Nom.
Conductors:	32 x 0.2mm
Cross Sectional Area:	1.0mm²
Insulation:	PVC
W2280 Brown	
W2282 Blue	
W2284 Red	

.76¢ m

Ultra Heavy Duty Hook-Up Wire



Rating:	30A max.
Conductors:	41 x 0.32mm
Cross Sectional Area:	3.3mm²
Insulation:	PVC
W2286 Red	
W2288 Black	

$1.54 m

Figure-8 Medium Duty Power Cable

Rating:	50V, 5A nom
Conductors:	50 x 0.12mm
Cross Sectional Area:	0.55mm²
Insulation:	PVC

Compact, medium duty DC cable suited to supplying power to smaller projects etc.

W2022

93¢ m

Figure-8 Heavy Duty Power Cable

Rating:	50V, 17A max
Conductors:	26 x 0.3mm
Cross Sectional Area:	1.8mm²
Insulation:	PVC

For any high current DC application

Ideal for running 150W spot lights etc on the car, or any high current DC application. Colour-coded insulation to find polarity easier.

W2025

$1.48 m

Auto Heavy Duty Power Cable

Rating:	50V, 19A max
Conductors:	26 x 0.32mm
Cross Sectional Area:	2.1mm²
Insulation:	PVC

Similar to the Figure-8 cable but provides a larger conductor area. Colour-coded and has an extra sheath for added protection in automotive applications.

W2027

$2.43 m

Extra Heavy Duty Power Cable - Red

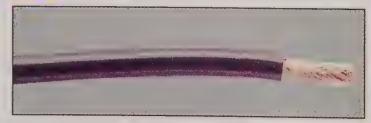
Rating:	50V, 50A max.
Conductors:	630 x 0.12mm
Cross Sectional Area:	7.1mm²
Insulation:	Flexible PVC, 6.5mm OD

Ideal for high current DC applications such as high-power car audio installations, communications equipment, and solar power systems. High-quality O.F.C copper conductors with highly flexible PVC sheath

W2302

$2.98 m

Extra Heavy Duty Power Cable - Black



Rating:	50V, 50A max.
Conductors:	630 x 0.12mm
Cross Sectional Area:	7.1mm²
Insulation:	Flexible PVC, 6.5mm OD

Ideal for high current DC applications such as high-power car audio installations, communications equipment, and solar power systems. High-quality O.F.C copper conductors with highly flexible PVC sheath.

W2304

$2.98 m

Wholesale Division

For bulk pricing and delivery to your door,contact our experienced customer service team

DICK SMITH ELECTRONICS

0800 373 347

Direct Sales

Light Duty Speaker Cable

Conductors: 14 x 0.14mm
Cross Sectional Area: 0.22mm²
Insulation: PVC
Suitable for short runs in intercoms and hi-fi applications. PVC insulation with colour-coded polarity indicator.
W2010

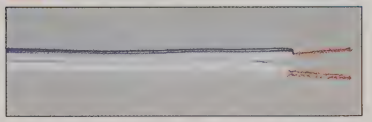
LIMITED STOCK! .48¢ m

Medium Duty Speaker Cable

Conductors: 14 x 0.20mm
Cross Sectional Area: 0.44mm²
Insulation: PVC
For use in longer runs. PVC insulation with colour coded polarity indicator.
W2012

.58¢ m

Heavy Duty Speaker Cable



Conductors: 24 x 0.20mm
Cross Sectional Area: 0.75mm²
Insulation: PVC
Heavy duty mains rated (240V AC @ 7.5A), insulated cable for use with medium to high power and long runs. PVC insulation with colour-coded polarity indicator.
W2020

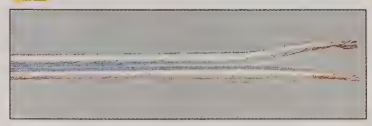
.84¢ m

OFC Speaker Cable

Conductors: 30 x 0.12mm
Cross Sectional Area: 0.34mm²
Insulation: PVC
Nominal capacitance: 44.5pF/m
Ideal for home theatre and Hi-Fi satellite speakers, PC sound systems and wherever low power systems are involved.
W2008

.78¢ m

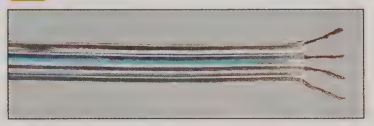
Fig 8 60/0.12mm Speaker Cable



Conductors: 60 x 0.12mm
Cross Sectional Area: 0.66mm²
Insulation: PVC
Nominal capacitance: 50pF/m
Provides the best performance for demanding audiophile applications, and its attractive translucent insulation makes it unobtrusive in most installations.
W2013

$1.48 m

Dual Figure 8 OFC Cable



Conductors: 60 x 0.12mm
Cross Sectional Area: 0.66mm²
Insulation: PVC
Nominal capacitance: 50pF/m
Provides the best performance for demanding audiophile applications, and its attractive translucent insulation makes it unobtrusive in most installations.
W2023

$2.73 m

Low Loss OFC Speaker Cable

Conductors: 168 x 0.12mm
Cross Sectional Area: 1.9mm²
Insulation: PVC
Nominal capacitance: 60pF/m
Best performance for demanding audiophile applications, and its attractive translucent insulation makes it unobtrusive in most installations.
W2016

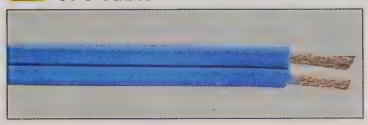
$3.14 m

Super Low Loss OFC Speaker Cable

Conductors: 315 x 0.12mm
Cross Sectional Area: 3.5mm²
Insulation: PVC
Nominal capacitance: 60pF/m
Suitable for high to very high power installations.
W2017

$4.26 m

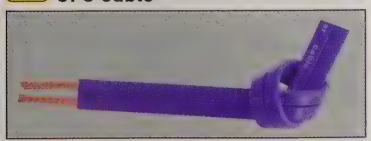
Harmony 16 Braid Flat OFC Cable



Conductors: 112 x 0.10mm
Cross Sectional Area: 0.88mm²
Insulation: PVC
Nominal Capacitance: 40pF/m
Designed for audio and home theatre applications. It has a unique low profile so it can be hidden under or behind with ease.
W2000

$2.28 m

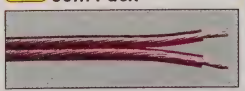
Harmony 24 Braid Flat OFC Cable



Conductors: 168 x 0.10mm
Cross Sectional Area: 1.3mm²
Insulation: PVC
Nominal Capacitance: 40pF/m
Designed for audio and home theatre applications. A unique low profile so it can be hidden under or behind with ease.
W2001

$2.68 m

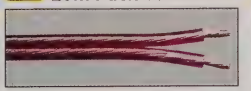
OFC Speaker Cable - 30m Pack



Quality twin flex heavy duty Fig 8 (2x49 strands x 0.12) oxygen free copper cable. Ideal for connecting hi-fi speakers to stereo, hi-fi systems, surround sound, home theatres and digital sound systems.
W2801

$49.93

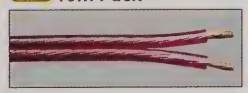
OFC Speaker Cable - 20m Pack 16AWG



Quality twin flex heavy duty Fig 8 (2x119 strands x 0.12) oxygen free copper cable. Ideal for connecting hi-fi speakers to stereo, hi-fi systems, surround sound, home theatres and digital sound systems.
W2803

$49.93

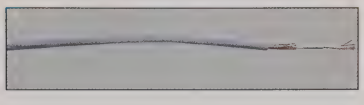
OFC Speaker Cable - 10m Pack



Premium quality oxygen free cable speaker cable. 12AWG.
W2805

$49.93

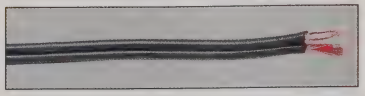
Single-Core Shielded Audio Cable



Centre Conductors: 7 x 0.12mm copper
Shielding: 32 x 0.12mm, spiral wrapped
Diameter: 3mm OD
Nom. Capacitance: 200pF/m
W2030

.54 ¢/m

Twin-Core Mini Shielded Audio Cable



Conductors: 16 x 0.1mm copper
Shielding: 30 x 0.11mm wrapped
Diameter: 2.5 x 5mm OD
Nom. Capacitance: 370pF/m
W2026

.74 ¢/m

Twin-Core Shielded Audio Cable

Centre Conductors: 7 x 0.12mm copper
Shielding: 32 x 0.12mm, spiral wrapped
Diameter: 4mm OD
Nom. Capacitance: 210pF/m (Conductor-shield)
W2034

.94 ¢/m

Twin-Shielded Fig. 8 Audio Cable

Centre Conductors: 7 x 0.12mm copper
Shielding: 32 x 0.12mm, spiral wrapped
Diameter: 2 x 2.8mm OD
Nom. Capacitance: 210pF/m
W2036

$1.08/m

4-Core Shielded Audio Cable

Centre Conductors: 7 x 0.12mm copper
Shielding: 32 x 0.12mm, spiral wrapped
Diameter: 5mm OD
Nom. Capacitance: 190pF/m (Conductor-shield)
W2038

$1.68/m

4-Core Flat Audio Cable

Centre Conductors: 10 x 0.1mm copper
Shielding: Spiral-wrapped copper
Diameter: 4 x 2.5mm OD
Nom. Capacitance: 300pF/m
W2039

$1.88/m

Super OFC Single Specialised Cable

Centre Conductors: 14 x 0.18mm
Shielding: 112 x 0.12mm 12 pitch braided copper
Sheath: PVC, 6mm OD
Nom. Capacitance: 85pF/m
High quality, single-core shielded cable made with Oxygen Free Copper (OFC) for maximum conductivity and shielding properties (90% coverage).
W2032

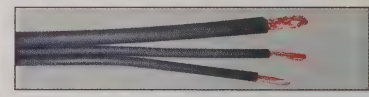
$2.88/m

Super OFC Fig. 8 Audio Cable

Centre Conductors: 14 x 0.18mm
Shielding: 112 x 0.12mm 12 pitch braided copper
Sheath: PVC
Nom. Capacitance: 85pF/m
Great for audio use eg. making up RCA to RCA patch leads. 90% shield coverage.
W2033

$3.98/m

Harmony Heavy Duty Video & Audio Cable



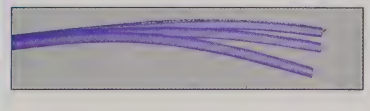
VIDEO:
Centre Conductors: 30 x 0.12mm bare copper
Shielding: 112 x 0.11mm 12 bare copper braided

AUDIO:
Centre Conductors: 20 x 0.12mm bare copper
Shielding: 45 x 0.11mm x2 copper spiral wrapped
External Sheath: PVC Jacketing (matt)
W2003

$4.42/m

MICROPHONE CABLES

Cable Shielded Component RGB



Centre Conductors: 30 x 0.12mm bare copper
Shielding: 80 x 0.11mm bare copper strands
External Sheath: PVC, Jacketing (matt)
Average Capacitance: 63pF/m
W2007

$3.98/m

Microphone Cable

Centre Conductors: 20 x 0.12mm copper
Shielding: Braided copper
Sheath: PVC, 6mm OD
Nom. Capacitance: 90pF/m (conductor-shield) 60pF/m (conductor-conductor)
W2035

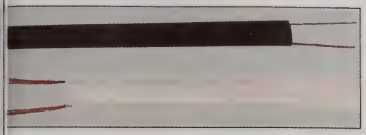
$2.34/m

Coiled Microphone Cable

Centre Conductors: 30 x 0.08mm
Shielding: wrapped copper (1 conductor only)
Sheath: PVC
Extends fully up to 1 metre. 3 core, ideal for transceiver microphone leads.
W1365

$9.88

TV Ribbon Cable – Black / Clear



300 ohm ribbon cable for connecting antennas to TV sets. Suitable for shorter runs. Available in both black and clear. VHF use only.
Black W 2070
Clear W 2071

.56¢ m

RG6 TV Coax Cable – White

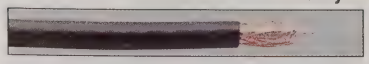
Low loss 75 Ohm coax preferred by professional installers. Used where less attentuation of the signal or longer cable lengths are required between antenna and television socket. Tinned copper braiding.

Conductor:	1.0mm Bare Copper
Dielectric:	4.60mm Foam PE
Braiding:	Copper Sheath 64x0.12mm Tinned A1 Foil and 6.50mm PVC, Meter Marked
Attenuation @ 100m:	100MHz: 7.4dB 200MHz:10.3dB 500MHz:16.4dB 900MHz:22.8dB
Normal Velocity Ratio:	83%

White W 2086

$1.98 m

TV Coaxial Cable RG-59U Economy



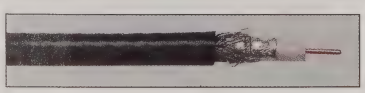
Economical 75 ohm coax as used by many installers. Suitable for most average installations where there's a reasonable signal and runs are not too long.

Centre Conductor:	1 x 0.6mm
Shielding:	Foil shield & copper braid
Dielectric:	Solid P.E.
Attenuation @ 100m:	100MHz: 7dB, 300MHz: 14dB, 550MHz: 23dB

W2081

$1.08 m

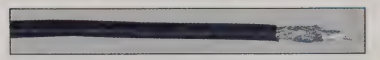
TV Coax Cable 75 Ohm Heavy Duty RG-6 Quad



A quality RG-6 quad shield cable suitable for digital TV, pay-TV and satellite TV installations.
W2087

NEW! **$1.78 m**

RG6 TV Coax Cable – Black



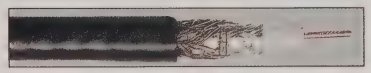
Low loss 75 Ohm coax preferred by professional installers. Used where less attentuation of the signal or longer cable lengths are required between antenna and television socket. Tinned copper braiding.

Conductor:	1.0mm Bare Copper
Dielectric:	4.60mm Foam PE
Braiding:	Copper Sheath 64x0.12mm Tinned A1 Foil and 6.50mm PVC, Meter Marked
Attenuation @ 100m:	100MHz: 7.4dB 200MHz:10.3dB 500MHz:16.4dB 900MHz:22.8dB
Normal Velocity Ratio:	83%

Black W2084

$1.48 m

Belden RG6 Coax Cable



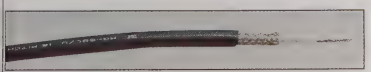
Conductor:	1.0mm Copper Covered Steel
Dielectric:	Gas injected polyethylene foam
Shield:	Duobond II, 60% aluminium braid
Attenuation @ 100m:	211MHz: 9.16dB 300MHz: 10.98dB 500MHz: 14.29dB 900MHz: 19.31dB 1000MHz: 20.41dB
Velocity:	82%

W 1201

$2.38 m

COMMUNICATION CABLES

50 Ohm RG-58C/U Coaxial Cable

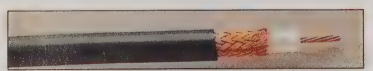


Centre Conductors:	19 x 0.18mm tinned copper
Shielding:	Braided tinned copper, 94.2% coverage
Dielectric:	PE Type A
Attenuation @ 100m:	100MHz: 16dB 200MHz: 24dB 400MHz: 38dB

Commercial grade 50 ohm coax. Complies with Mil Spec MIL-C-17D. Ideal for mobile installations due to its small 5mm OD size. It can also be used outdoors over long periods due to its UV resistant PVC outer sheath.
W 2092

$1.44 m

50 Ohm RG-213/U Coaxial Cable



Centre Conductors:	7 x 0.7mm copper
Shielding:	Braided copper, 97% coverage.
Dielectric:	PE
Attenuation @ 100m:	50MHz: 5.2dB 100MHz: 7.2dB 400MHz: 15.4dB

A 10mm diameter, low loss 50 ohm cable for HF and VHF/UHF applications. Complies with MIL-C-17D. Ideal for longer runs or high power operation.
W 2099

$3.93 m

Wholesale Division
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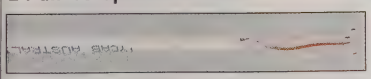
DICK SMITH ELECTRONICS
0800 373 347
Direct Sales

TELEPHONE CABLES

2 Pair Telephone Cable

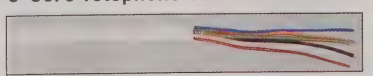


Conductors:	1 x 0.51mm solid
Sheathing:	75°C PVC
Telepermit:	PTC222/98/003

W2128

.88¢ m

6-Core Telephone Cable



Conductor:	6 x 0.40mm bare copper
Insulation:	0.80mm PVC
Sheath:	3.80mm PVC (White)
Telepermit:	PTC 204/94/002

W2102

.98¢ m

4-Conductor/Flat Telephone Cable

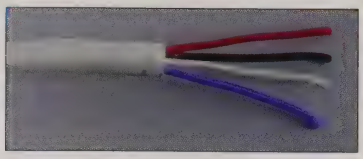
Suitable for patch leads and handset cords.

Conductors:	7 x 0.16mm
Sheathing:	PVC
Nom OD:	7mm

W2121

.74¢ m

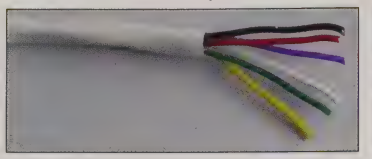
4 Core Tinned Security Cable



Conductors: 4 cores of 7 x 0.20mm tinned copper
Insulation: White PVC, metre marked
Nominal Overall Diameter: 4.0mm
W9910

.88 m

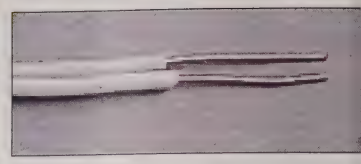
6 Core Tinned Security Cable



Conductors: 6 cores of 7 x 0.20mm tinned copper
Insulation: White PVC, metre marked
Nominal Overall Diameter: 5.2mm
W9915

$1.14 m

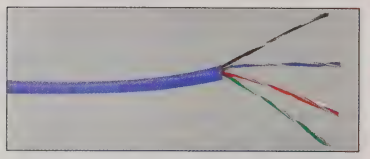
Bell Cable



Ideal for use with doorbells or intercoms.
W2005

LIMITED STOCK! **66¢ m**

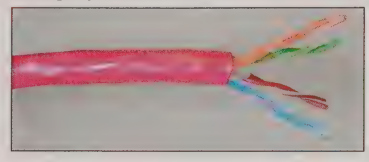
Category 5E 350MHz Data Cable



Unicable CAT5 Enhanced is ideal for emerging applications such as 1000BaseT (Gigabit Ethernet), IEEE 8.2.3, IEEE 802.5 and 622Mbps ATM (Asynchronous Transfer Mode) as well as current CAT5 applications including 10BaseT and 100BaseT Fast Ethernet.
W2156

$1.34 m

Category 6 Cable



Catergory 6 cable is ideal for emerging applications such as 1000 baset (Gigabit Ethernet), IEEE 802.3, IEEE 802.5, and 6222 MBPS ATM (Asynchronous Transfer mode), as well as current catergory 5 applications.
W2157

$1.78 m

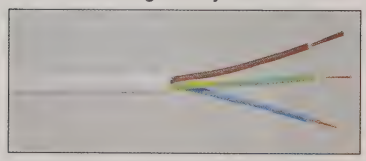
Computer/Data Cable

Conductors: 7 x 0.2mm
Sheath: PVC
Shielding: Foil with drain wire
Nom. OD: 5.5mm

8-Core Computer Cable W2046 **$2.08 m**

12-Core Computer Cable W2041 **$2.48 m**

3 Core Ultra Light Duty Mains Cable



Suitable for small mains rated projects, test equipment and low current applications.
W2052

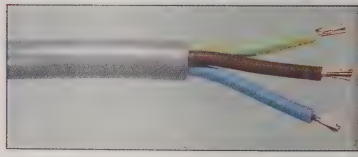
$1.64 m

3 Core Light Duty Mains Cable

Suitable for projects, test equipment, etc not subject to excessive wear and tear, or where size and weight are important.
W2055

$1.94 m

3 Core Ordinary Duty Mains Cable 10A



The ideal cable for power tools, etc where high drain and excessive wear call for something a little more robust.
W2058

$2.54 m

Narva Auto Cable 0.3mm

7 Meters of cable rated at 10 Amp. Single core. On a hangable reel with a wire catch latch.
Red W9824
Black W9825 **$4.43 ea**

Narva Auto Cable 0.4mm

4 Meters of cable rated at 15 Amp. Single core. On a hangable reel with a wire catch latch.
Black W9827
Red W9826 **$4.93 ea**

Speaker Cable 7 Mtr Twin Core

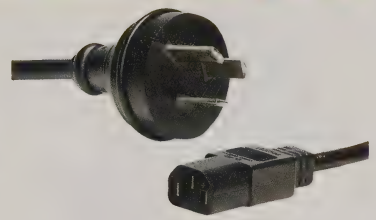
7 Meters of grey speaker cable. Twin core. On a hangable reel with a wire catch latch.
W9828 **$4.93**

Figure 8 Twin Core Cable

4 Meters of cable rated at 10 Amp. Double core. On a hangable reel with a wire catch latch.
W9829 **$4.93**

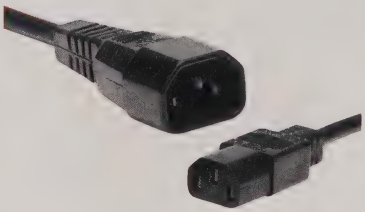
Universal Mains Lead
It's 2 metres long and has a 2-pin mains plug on one end and a 2-pin figure-8 type socket on the other.
W1360
$8.94

Figure 8 Mains Lead with Earth
2 metre long lead with 3 pin mains plug on one end and earthed figure eight connector on the other. Suitable for use with many laptops.
W1350
$9.94

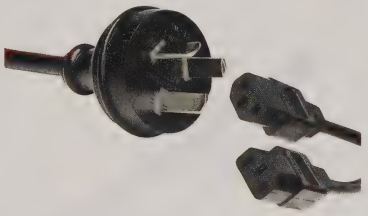


IEC Mains Lead
Approved 2-metre mains lead with standard 3-pin plug on one end and 3-pin IEC socket on the other. As used on most computers and communications equipment. 10amp rated.
W1362
$10.62

IEC Mains Lead - Right Angle
Approved 2 metre mains lead similar to our standard IEC lead (W-1362), but with a right angle IEC socket.
W1375
$11.94

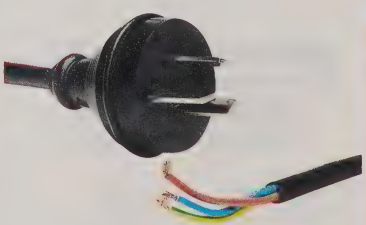


IEC Male/Female Extension Lead
Quality 2-metre extension lead. Ideal for connecting monitor to your computer.
W1366
$10.94



Dual IEC Mains Lead
A unique 2 metre long mains lead with a pin mains plug on one end and two IEC sockets on the other. Run your PC and monitor from the one powerpoint.
W1352
$16.92

Mains Appliance Lead
Grooved IEC line connector designed for domestic appliances such as TVs, electric kettles, rice cookers, etc.
W1391
$19.93



Mains Cable With 3-Pin Plug
Light duty cable (240V AC @ 10A) fitted with standard 3-pin plug on one end. The other end is bare ready for connection to your project. 2 metres long.
W2057
$6.48

Wholesale Division
For bulk pricing and delivery to your door, contact our experienced customer service team
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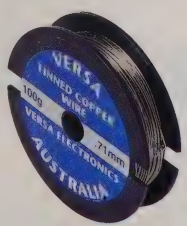
0800 373 347
Direct Sales



Tinned Copper Wire
High-quality tinned copper wire (22SWG) in handy 100g roll. Ideal for PC board links, hard wire jumper leads, chassis wiring, etc. Approximately 27-metre roll of 0.71mm tinned copper wire. W3015
$9.93

Self-Fluxing Winding Wire
Ideal for coil winding, motor rewinding, transformer building, etc.

25g Rolls

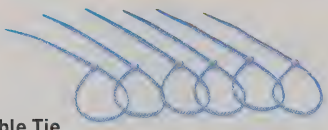
Gauge B&S	Gauge SWG	Diam mm	Length Metres	Cat No.
21	22	0.71	7	W3123
24	25	0.50	13	W3124
30	33	0.25	55	W3130
32	36	0.20	85	W3132

$7.48 ea

100g Rolls

Gauge B&S	Gauge SWG	Diam mm	Length Metres	Cat No.
18	19	1.0	14	W3118
22	23	0.63	35	W3122

$10.48 ea



Cable Tie Neutral

Size	Pack Qty	Cat No	Price
100 x 2.5mm	100	H1974	$7.18
100 x 2.5mm	25	H1950	$2.93
200 x 2.5mm	100	H1976	$13.93
200 x 2.5mm	25	H1951	$3.48
292 x 3.5mm	25	H1952	$5.93
368 x 4.8mm	25	H1953	$7.23

Cable Tie Black

Size	Pack Qty	Cat No	Price
100 x 2.5mm	100	H1980	$5.04
100 x 2.5mm	25	H1955	$2.12
200 x 2.5mm	100	H1982	$11.24
200 x 2.5mm	25	H1956	$4.06
292 x 3.5mm	25	H1957	$6.88
368 x 4.8mm	25	H1958	$7.93

Weller 350pc Assorted Cable Ties

350 cable ties of assorted lengths and colours.
H2024
LIMITED STOCK

$19.93

Cable Tie Identify

Size	Pack Qty	Cat No	Price
100mm	25	H1973	$3.93

LIMITED STOCK

Cable Tie Releasable

Size	Pack Qty	Cat No	Price
120mm	100	H1929	$6.23
124mm	10	H1977	$2.43
200mm	100	H1997	$16.93

Wonder Coloured Cable Straps Pack 10

H1949

$10.44

3M Command Clips

Decorating Clips

Remove and reuse adhesive strips. 20 clips and 24 strips per pack. H2010 $4.93

Cord Clips

Holds wires up to 3/8 inch in diameter with 4 clips and 6 strips per pack. H2012 $4.93

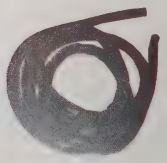
Small Cord Clips

Holds wires up to 1/4 inch in diameter with 8 clips and 12 strips per pack. H2011 $4.93

Hook and Loop Cable Straps

Re-usable cable ties that you can open or close to add or remove cables.

Size	Pack Qty	Cat No	Price
25 x 200mm	10	H1946	$14.93
25 x 300mm	10	H1947	$18.22



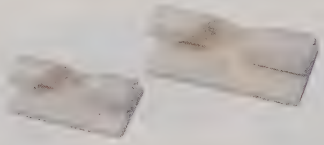
Spiral Cable Tidies

Tidy up all those messy cables with this spiral cable tidy. 1.8 metre length, 12mm diameter

W4064 Back	$11.78
W4063 Clear	$11.78

Cable Tie Mounting Bases

Size	Pack Qty	Cat No	Price
19x19mm	10	H1989	$4.43
19x19mm	50	H1991	$12.48
25x25mm	50	H1993	$14.48



Large White Stick-On Cable Clips

Adhesive backed plastic clips to hold your cable in place. Pack of 10.

Size	Pack Qty	Cat No	Price
Large	10	H1904	$7.93
Small	20	H1906	$8.58

5mm Cable Clamp

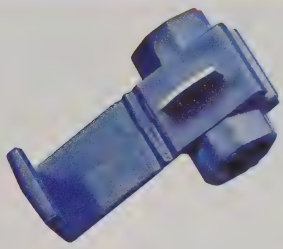
Heavy duty nylon cable clamps. In packs of 5.

Size	Pack Qty	Cat No	Price
13mm(1/2")	5	H1963	$4.28
6.35mm(1/4")	5	H1965	$2.44
5mm(3/16")	5	H1964	$2.44
8mm(5/16)	5	H1966	$2.44

Quick Fix Cable Clamps

Designed to hold mains cable firmly in timber, masonry etc.

Size	Cable type	Colour	Pack Qty	Cat No	Price
4mm	Round	White	20	W4050	$1.98
5mm	Figure-8	White	20	W4020	$3.48
5mm	Flat	White	100	W4056	$7.80
6mm	Round	White	20	W4051	$2.98
6mm	Round	Black	20	W4052	$3.48
6mm	Round	Black	100	W4055	$7.80
8mm	Round	White	20	W4053	$3.98



Wire Tab Joiner 10pk

Easily joins two wires, just insert and clamp. Suits wires from 0.5mm to 2.5mm and comes in a pack of 10.

H1780

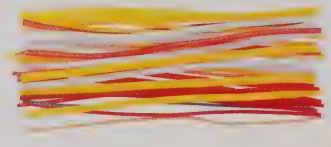
$4.93

Telephone Splice Connector

The simple way to join 2 wires.

H5658

$4.88



Spaghetti Tubing Pack

Contains 30 lengths of assorted colours and diameters of spaghetti tubing (each length is greater than 150mm long). Over 4.5m in total length.

W4040

$5.73

Hobbyists Heat-Shrink Pack

Handy pack of heat-shrink tube in assorted colours, sizes and lengths (short lengths only). It's ideal for a variety of projects, etc. Includes 3.2mm, 4.8mm, 6.4mm, 9.5mm, and 12.7mm diameter tubing.

W4060

$6.93

Heat-Shrinkable Material 3:1

Grade quality shrinks to approximately 1/3 listed diameter. Comes in a pack of 5 lengths by 200mm long.

Size	Colour	Cat No	Price
1.5mm	Black	W4000	$5.80
3mm	Black	W4401	$6.48
7mm	Black	W4402	$8.20

Heat-Shrinkable Material 2:1 - 1.2m x 1.6mm

High flexibility, radiation cross linked, flame retardant (except clear), tubing. Military grade polyolefin.

Size	Black	Red	Other colours	Price
1.6mm	W4100	W4600	W4102	$2.23
3.2mm	W4104	W4607	W4106	$2.63
4.8mm	W4108	W4614	W4110	$2.86
6.4mm	W4112	W4621	W4114	$3.14
9.5mm	W4116	W4628	W4118	$3.14
12.7mm	W4120	W4635	W4122	$4.53
19.1mm	W4124	W4642	W4126	$4.94
25.4mm	W4128			$8.73

HPM Fuse Wire

A handy pack of fuse wire for use in mains fuse boxes. Three different sizes are provided.

5, 10 15A
H31832

8A, 16A, 20A, 30A
W3180

$2.44

Resistance Wire Pack - Nichrome 80

Nichrome 80 is suitable for resistance heating elements where extreme temperatures (up to 1200°C) are involved. It's supplied in a 4m pack of 28 B&S gauge (0.32mm diameter) and provides a resistance of 13.4 ohms/m at 208°C.

W3205

$2.93

Resistance Wire Pack - Cuprothal

Suitable for the construction of wire-wound resistors, small heater elements, shunts, etc. Also ideal for emitter resistors in high power amplifiers. The wire is 28 B&S (0.32mm), it's solderable and has a resistance of of 6.08ohms/m. 4m pack.

W3200

$2.23

DICK SMITH ELECTRONICS That's where you go!

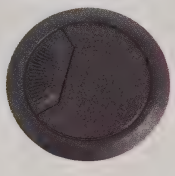
MISCELLANEOUS HARDWARE

Nylon Cable Gland 2 pk

They're water-tight and screw together to give coax (or any other sort of cable that will fit) perfect protection! Petrol and oil resistant, totally submersible.

H1930	3 - 6.5mm
H1932	5 - 10mm

$5.64



Desk Grommet 60mm

Tidy up those computer cords on your desk. 60mm diameter.

H1731	Almond
H1730	Black

$11.93

Cord Clamp Grommets 6mm 10pk

Heavy duty grommets which are essential for the prevention of fraying and short circuits where cabling passes through a chassis.

H1716

$4.16

Flush PCB Support 10pk

Size	Pack Qty	Cat No	Price
PCB Supports	6mm	H1892	$2.88
PCB Supports	12mm	H1893	$2.88
Nylon P.C.B	10mm	H1883	$2.88

Insulated Spacer 10mm 5pk

Insulated spacers complete with screws and washers. 8mm outside diameter requiring a 3mm clearance hole. Pack of 5.

H1861

$6.88

Assorted Drive Belts

Universal assortment of drive belts.

Size	Pack Qty	Cat No	Price
Assorted Audio	10 pk	H6015	$8.22
Assorted Turntable	11 pk	H6018	$34.93
Assorted Video	14 pk	H6016	$14.30

Tidy up those computer cords on your desk.

Electronics for Beginners

Used by schools and colleges throughout New Zealand!

Funway 1 kits are our best selling electronic kits for beginners. Used in schools and colleges across New Zealand, these kits teach the basics about electronics in a fun and practical way. Funway 1 assumes you know nothing about electronics and goes through the basics by showing you the components and how they piece together in circuits.
It also shows you how to go on with further experiments with your circuits when they are finished. A perfect idea for kids, these kits can entertain and teach for hours. For safety reasons, no soldering is required and there are no dangerous voltages to play with.
Please note:
These kits do not include instructions. All information is published in the Funway 1 Book (B2600), which is necessary before construction can begin on any kit.

Not suitable for children under 3 years of age.
Kits contain small parts.

Funway 1 Project Kits 1 – 10

- Supplied with all components necessary to build any one of the first ten projects
- No soldering required, so parts can be reuse to build the next project
- All projects are battery powered making them a safe and educational learning experience

K2600

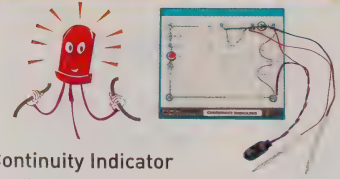
$19.87

Funway Into Electronics Volume 1

Learn electronics the fun way! This book provides hours of fun and excitement building 20 educational Funway 1 projects. Book only.
B2600

$7.93

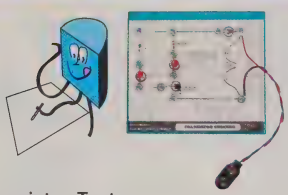
PROJECT NO. 1



Continuity Indicator

Just like a multimeter, it will show you if you have a complete circuit or an open circuit. A Light Emitting Diode (LED) will glow if the circuit is complete.

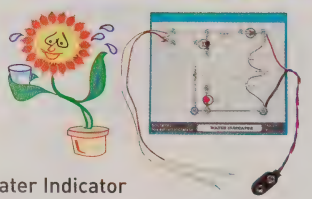
PROJECT NO. 2



Transistor Tester

As well as telling you if your transistor is okay, it shows you how transistors work.

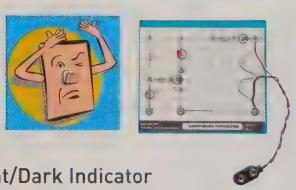
PROJECT NO. 3



Water Indicator

Are your plants thirsty? This simple circuit will indicate how much water is in the soil.

PROJECT NO. 4



Light/Dark Indicator

Using a light-dependent resistor, it will light an LED if light falls onto it. This type of detector is used in some alarms.

PROJECT NO. 5

Flasher

Want to add flashing lights to a model train layout? This project will do it for you!

PROJECT NO. 6

Electronic Siren

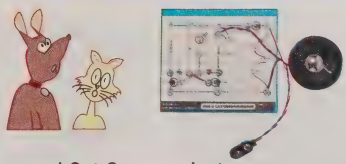
A mini version of a police car siren. Fantastic for adding to toys.

PROJECT NO. 7

Music Maker

Make your own electronic organ and play your own tunes.

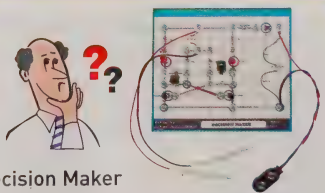
PROJECT NO. 8



Dog and Cat Communicator

Dogs and cats can hear sounds that human beings cannot. With this great dog and cat communicator, you might be able to 'talk to the animals'!

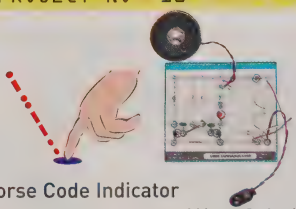
PROJECT NO. 9



Decision Maker

As used by top executives and politicians. Just press the button and it will decide 'yes' or 'no'.

PROJECT NO. 10



Morse Code Indicator

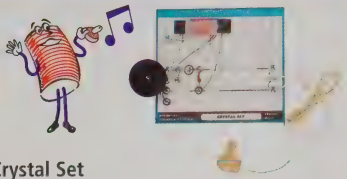
Amateur radio operators send Morse Code all over the world. Now you can learn the code and send secret messages.

PROJECT NO. 11

Sound Effects Generator

Ever wondered how those sound effects are made in the movies? Build this and you can make some of your own!

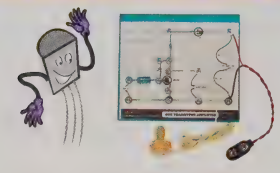
PROJECT NO. 12



Crystal Set

Free radio! No batteries to buy, nothing to turn off. Listen in to your favourite local AM station!

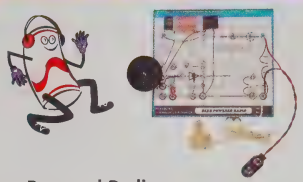
PROJECT NO. 13



One-Transistor Amplifier

Build your own amplifier. Can be used with the Crystal Set and other projects!

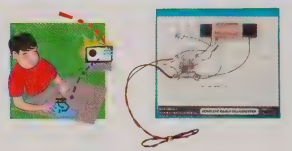
PROJECT NO. 14



Beer-Powered Radio

Yes, it actually runs on beer or fizzy drink! Listen in but don't drink the battery.

PROJECT NO. 15



The Simplest Transmitter In Town

Allows you to transmit Morse Code across the room.

PROJECT NO. 16

Two-Transistor Amplifier

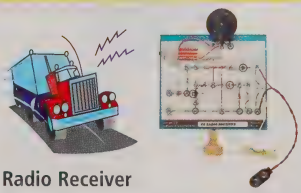
Even more power! Enough to drive a speaker so you can listen without headphones.

PROJECT NO. 17

Voice Transmitter

Imagine being able to transmit your voice to a radio set! This kit makes it easy.

PROJECT NO. 18



CB Radio Receiver

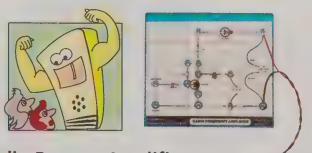
Listen in to the truckies and other CBers. You don't have to spend a fortune on a CB.

PROJECT NO. 19

Amateur Radio Receiver

A radio receiver to listen in to nearby ham operators and other stations in the 2 – 6MHz bands.

PROJECT NO. 20



Radio Booster Amplifier

A radio frequency amplifier to give other radios even better reception!

Electronics for Beginners

Another 10 exciting Funway 1 Projects to build!

Please note

These kits do not include instructions. All information is published in the Funway 1 Book (B2600), which is necessary before construction can begin on any kit.

Not suitable for children under 3 years of age.

Kits contain small parts.

DSE Funway 1 Project Kits 11 – 20

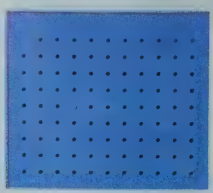
- Contains the more specialised components required to build any of the last ten projects (11 – 20) in Funway 1
- No soldering is required and there are no dangerous voltages
- You will also need the K2600 (1–10) kit and (B2600) book to build these projects
- Components supplied allow the construction of these great Kits, but you will need to pull them apart to build the next one!

K2610 **$14.88**

DSE Spring Terminals

These optional accessories have been designed especially for Funway 1 kits. Makes connecting and disconnecting components a breeze. Pack of 28.

K2602 **$4.88**



Plastic Breadboards

Expand your Funway 1 projects into bigger and better things with extra plastic breadboards.

H4050 **$2.51**

Something Here For Everyone!

Funway Into Electronics 2 takes over where Funway 1 leaves Off!

These projects are all built on printed circuit boards, which means all components are soldered into position. Therefore, a soldering iron will be required. Funway 2 teaches you how to solder, how to avoid the pitfalls, and how to use a multimeter. The projects have been specially chosen to be practical. They are all battery operated and very safe.

The Funway 2 book provides instructions for all Funway 2 kits.

Please Note

All Funway kits use battery power, so there are no dangerous voltages. However, Funway 2 kits involve soldering, which may require supervision if attempted by younger children. Not suitable for children under 3 years of age. Kits contain small parts.

Funway into Electronics Vol. 2

Learn Electronics the fun way! This book provides hours of fun and excitement building 20 educational Funway 2 projects. Book only.

B2605 **$9.93**

PROJECT NO. 1

Flasher

- Great for electronic jewellery
- Use it as a burglar warning light, etc – the choice is yours!

K2621

$9.98

PROJECT NO. 2

Ding Dong Doorbell

- Sounds just like an old-fashioned doorbell
- A fun and simple project to build for your home

K2622

$15.48

PROJECT NO. 3

Morse Code Trainer

- Build this simple trainer and learn about Morse Code
- Now you can tap out those secret messages to your friends

K2623

$22.88

PROJECT NO. 4

Universal Timer

- Are the eggs too hard? Time them with this handy little device
- Can be set for as little as a few seconds to about 15 minutes

K2624

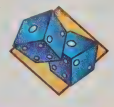
$19.24

PROJECT NO. 5

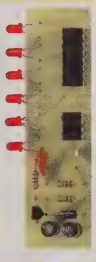
Electronic Dice

- Just as much fun to use as it is to build them
- They really pick randomly – there's no cheating with these dice!

K2625



$15.48



PROJECT NO. 6

Mini Organ

- Play a tune – it's easy!
- Uses the back of the PCB as the keyboard

K2626

$17.88

PROJECT NO. 7

Pocket Transistor Radio

- A fun way to teach yourself about the fundamentals of radio.
- Build your own receiver and then have fun using it.

K2627

$18.88

PROJECT NO. 8

Touch Switch

- Ever wondered how those lift-buttons work?
- Build this touch switch and you'll be able to work it out.

K2628

$15.48

PROJECT NO. 9

Mosquito Repeller

- Do mozzie repellents really work?
- Build this and you'll find out how and why.
- You won't hear it but the mozzies certainly will!

K2629

$16.77

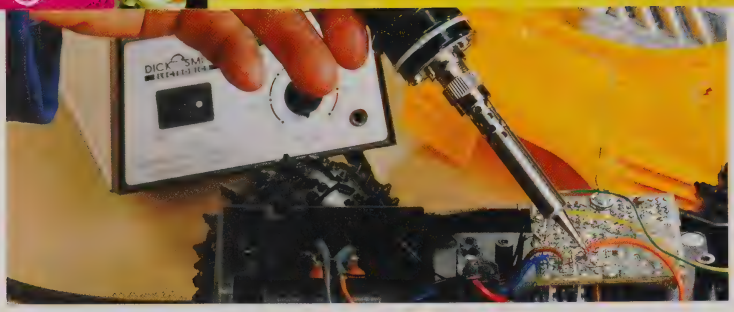
PROJECT NO. 10

Audio Amplifier

- Use it to make the intercom (Project No.18), or as a general purpose amplifier
- It's handy and has great sound output

K2630

$15.48



PROJECT NO. 11

Wireless Microphone

- Transmits to any standard FM radio – even one in another room or next door

K2631

$16.22

PROJECT NO. 12

Light-Activated Switch

- Useful in many security applications around the home
- If a light goes on, the switch activates

K2632

$12.77

PROJECT NO. 13

Metal/Pipe Locator

- Extremely handy for locating pipes, wires, etc in walls before drilling holes
- A simple but effective circuit

K2633

$15.88

PROJECT NO. 14

Sound-Activated Switch

- Activated by sound
- Use it as a telephone bell extender without breaking phone regulations

K2634

$19.27

PLEASE NOTE

These kits do not include instructions.

All information is published in the Funway 2 Book (B2605) which is necessary before construction can begin on any kit

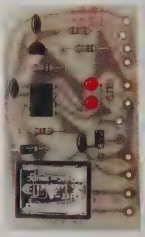
PROJECT NO. 13

Home/Car Alarm

- By constructing this simple circuit, you will learn the basics of alarms

K2635

$19.88



PROJECT NO. 15

Electronic Siren

- Just what you need to go with the Funway 2 Home/Car Alarm
- Also makes a terrific sound effects circuit

K2636

$16.22

PROJECT NO. 16

LED Level Display

- Hook it up to your stereo and it can warn you of dangerous overloads

K2637

$16.24

PROJECT NO. 17

Intercom Unit

- Build your own intercom and use it around the house
- Practical and simple to build

K2638

$19.93

PROJECT NO. 18

LED Counter Module

- A perfect introduction to integrated circuits
- Can be adapted to a huge variety of counting applications

Limited Stock

K2639

$12

PROJECT NO. 19

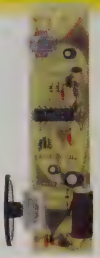
Shortwave Receiver

- With simple modifications, listen to emergency services and amateur broadcasts!

Limited Stock

K2640

$8



PROJECT NO. 19 PROJECT NO. 20 PROJECT NO. 19

Meccano Motion System 20

he famous Meccano construction system now as movement! You can re-use the 261 Meccano ieces to make 20 different models. Comes with a volt motor. 2 x AA batteries not included) K1260

$69.82

Meccano Motion System 40

Build up to 40 different models with the 387 re-useable Meccano building pieces. Includes a 6 Volt motor and storage case. 4x AA batteries (not inluded). K1262

$127

Meccano Motion System 50

This fun-filled pack features 599 Meccano building pieces which can be used to make up to 50 different models that move. 4x AA Batteries (not included) K1263

$147

Mixman

xperience music in a powerful new way. Plugs into your computer to reate your own mixing studio, packed with high-tech tools and unique eatures. Interactive and user-friendly, no other DJ system puts so uch mixing power right at your fingertips.
0061

$118

Movie Maker

Start making your own movies and even star in them! Turn your computer into the ultimate editing suite. There's so much you can do!
K0062

$148

Mindstorms Robotic Invention System 2.0

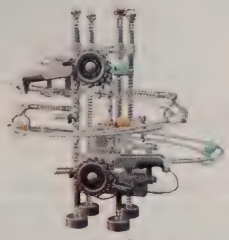
nleash your imagination. Design and build your own robots and then se your PC to program them to move, act and think on their own. 6xAA atteries (not included).
1488

$298

Radio Control Firebird Outlaw Plane Kit

The Firebird Outlaw Plane Kit has powerful twin motors with Digital Flight-Trak control system plus more.
K0059

$98.98



ear Master Marble Run Kit

omprises of 173 pieces that connect together to rate a fun marble track. Includes motor to return arbles to the top of the run.
0064

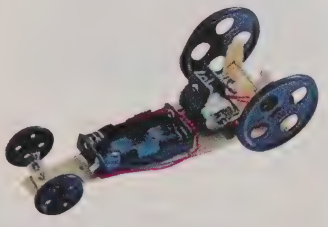
NEW 2005!

$49.97

Deluxe Microscope Set

Solid metal bodied microscope with a 67 piece accessory set and plastic storage case.
K0018

$49.98



Motorised Formula 1 Kit

This kit includes a motor, wheels, and all the necessary parts to build a real working race car. Powered by 2 x "AA" batteries (not included).
K1254

$16.44

Propeller Car Technokit

This kit contains all of the parts required to make your own working propeller driven car. Only 2x AA batteries required (not included) and you are off and racing. A fun technical project for kids aged 8+.

K1115

$9.93

Trip Wire Alarm Technokit

This fun kit is perfect for kids aged 8+ who have secrets to keep! It has everything you need to construct an alarmed trap. Takes 2x AA batteries (not included), build your electric trip wire and you will be able to detect anyone who sets the alarm off. K1116

$9.93

Electric Buzzwire Technokit

This project combines basic electronics with the creativity of constructing a functional game. Fun and educational for kids 8+. Requires 2x AA batteries (not included).

K1117

$19.86

Inventor Vehicles Technokit

Make up 3 different vehicles. Understand the principals of movement by making an electric motor driven buggy, a propeller driven car and a propeller driven hovercraft. All 3 vehicles can be made with the parts included. Batteries not included.

K1118

$34.93

Bubble Machine Technokit

This big technical kit has all the parts you need to make your own Bubble Machine. Easy to follow instructions and diagrams will help you with this big electronic motor driven project. Lots of fun. Requires 2x AA batteries (not included).

K1119

$34.93

Discovery Kit

Make simple electronic circuits with this Discovery Kit.

K9320 Discovery Tube - **Electricity Lab**
K9321 Discovery Tube - **Fingerprint Detective**
K9322 Discovery Kit - **Mini Electronic Lab**
K9323 Discovery Kits - **Mini Magnet Kit**

$9.93 ea

30-in-1 Electronic Learning Lab Kit

This educational kitset provides hours of fun and learning with its 30 different projects. 2xAA batteries (not included).

K0028

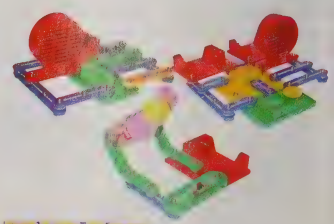
$29.98

130-in-1 Electronic Learning Lab Kit

The 130-in-1 Electronic lab is safe, solderless, educational and fun. Build a radio, AM broadcast station, electronic organ kitchen timer and much more.

K0029

$68.92



BrainBox

Use as a stand alone kit to create your own siren triggered manually or by either touch, sound, light, moisture, or magnetism. Contains 17 pieces, plus instructions.

K9305 **BrainBox Siren $9.88**
K9306 **BrainBox AM Radio $9.88**
K9307 **BrainBox Desk Fan $14.88**

SnapCircuits Project Set

Have fun learning all about electronics with the Snap Circuits Jr. project kit. Contains over 30 parts for building included kits, or creating your own!

SnapCircuits 100 Project Set
K9300

$39.98

SnapCircuits Project Set

Have fun learning all about electronics with the Snap Circuits Jr. project kit. Contains over 30 parts for building included kits, or creating your own!

SnapCircuits 300 Project Set
K9301

$79.83

DEGREE OF SIMPLICITY

Easy Designed for kit builders with little experience - you only need to know how to solder and the basic principles of electronics.

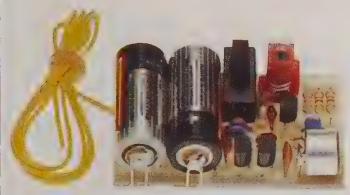
E

Detailed These are slightly more complex kits which require a bit more skill, and a reasonable knowledge of electronics and electricity.

D

MAINS WARNINGS!

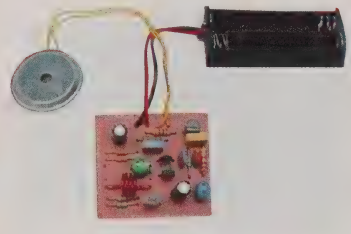
Kits marked with this symbol involve 230V AC mains power wiring. Please note that handling, testing and operating mains-powered equipment can be dangerous when basic safety rules are not followed. If you're inexperienced or not confident in working with mains-powered circuits, we strongly recommend that you DO NOT attempt these kits!



FM Wireless Microphone Kit

Small enough to fit inside a match box. Incredibly stable and sensitive circuitry. Use it to monitor your baby, a distant telephone, or as a one way intercom.
K5006

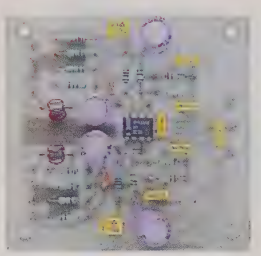
E $27.57



VHF FM/AM Radio Kit

This easy-to-build VHF receiver can receive speech and music with reasonable quality from FM stations.
K5015
Limited stock.

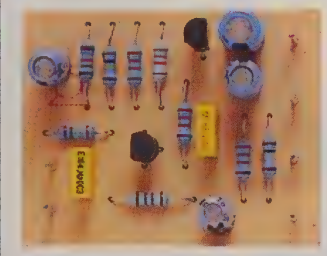
E $13.98



Universal Pre-Amp Kit

This low noise stereo pre-amplifier is easy to build and ideal for use with magnetic cartridges, cassette decks or microphone inputs. Uses a single dual op-amp IC (LM-833).
K5402

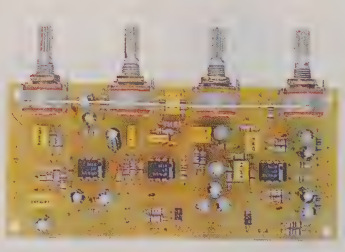
E $19.88



Champ Pre-Amp Kit

Designed to work with most small amplifier modules including our mini amplifier (K-5604). Simple to construct using two common transistors (BC548/BC558). Up to 40dB gain. Provision available on PCB for an (optional) electret mic insert.
K5608
Limited stock.

E $9.86



Stereo Pre-Amp Kit

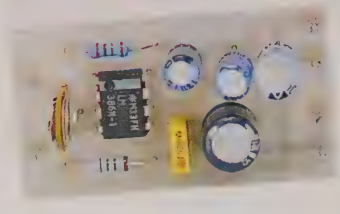
Upgrade your bare power amplifiers into a complete audio system with this quality pre-amp. Features volume, bass, treble and balance controls.
K2811
Limited stock.

E $19.96

Mini Stereo Amp Kit

Can be used for either stereo or bridge (mono) applications. Power source required: 9 volt battery. Supplied with components and PCB. Case optional (use H 2855). PCB size: 22mm x 50mm.
K2806
Limited stock.

E $9.98



0.5W Amplifier Module Kit

This tiny amp is about the size of a 9V battery. Produces 0.5W into 8ohms. Perfect for any of those projects that need an efficient, inexpensive amp that takes up minimal space. Power source required: 9 volt battery (not included). Case optional (use H 2855).

K5604

E $8.66

Mini Stereo Amplifier Kit

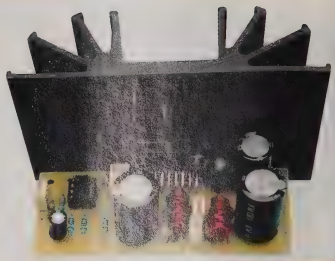
SILICON CHIP

This inexpensive circuit can give you the flexibility of a home hi-fi on your desk. Uses your personal stereo as the 'brains' of the operation. Utilises a tiny 8-pin DIL device which contains 2 amplifiers.

K5008

Limited stock.

E $19.92



Mighty Midget Amp Kit

SILICON CHIP

This compact audio amplifier module can deliver up 70W into a 4 ohm load when powered from a 12V car battery. Perfect audio amplifier module for a portable PA, a tiny sub-woofer amplifier, a booking amplifier, or a car audio amplifier.

K5401

E $49.63

SILICON CHIP

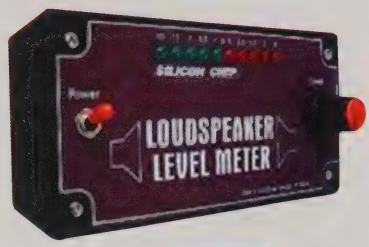
Kit 100W Amp Module SC 01/03

This amplifier module kit comes with components, PCB, fuses and transistor mounting bracket plus many more features.

K3431

Limited stock.

E $39.92



Kit Level Meter SC 04/04

SILICON CHIP

The Level Meter kit is the perfect tool to adjust all speaker levels precisely when setting up a home theatre system. Features an in-built microphone and a 10 LED bar graph display to let you quickly set all channels to the same relative level.

K5624

Limited stock.

E $19.88

Universal Power Supply

Can be used in a variety of ways as either a single or dual supply. Designed so that constructors can vary different voltages: +15V, -15V, +18 to 22V, or less than 15V.

K3435

Limited stock.

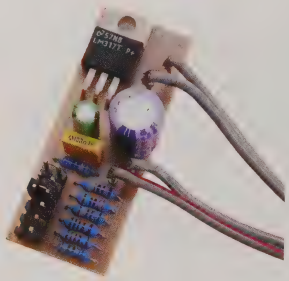
E $4.88

Universal Voltage Regulator Kit

Power almost any battery-operated device from a car battery or DC power adaptor up to 1.5A. By changing the resistor value on the PCB you can step-down voltage to 3V, 4.5V, 6V, 9V or other voltages within the range.

K3592

E $9.98

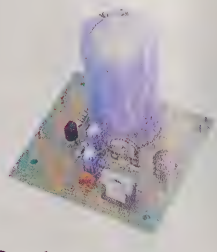


Universal Regulator Kit

A low cost, regulated DC power circuit suitable for powering external peripherals from a PC, or for powering a CD player from a car lighter socket etc.

K3594

E $9.98



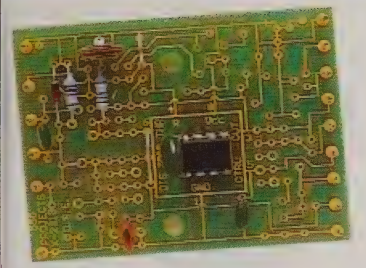
Regulated Power Supply Kit

Regulated output - 1.2 volts to 37.5 volts. Current - 1.5 amps. With built-in current and overload protection. Can be configured as a fixed or variable voltage regulator, voltage regulator with programmable current limiting,

K2808

Limited stock.

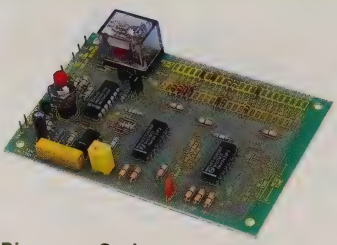
E $9.98



Multi 555 Timer Kit

Circuit uses a 555 timer IC as a building block for timer projects. Allows a timer or pulse generator to be quickly and cheaply put together with just a few parts. Capable of operating relays directly, and is easier to set up for those utility projects.
K2813

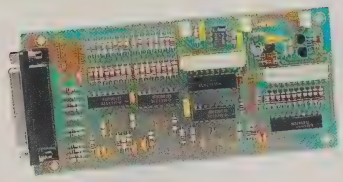
E $17.44



Discovery Series Kit Multi-Timer Module

Timing range between 0.1 sec. and 19.4 days. Can be configured for single cycle operation or for continuous repeat until reset. Power source required: 9V - 12V DC. Supplied with components and PCB. Case optional (use H 2851). PCB size: 74mm x 113mm.
K2807

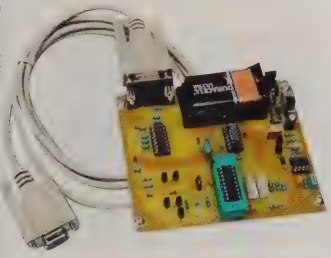
E $29.77



Parallel Port Interface Kit

Connects to a parallel centronics printer port on your computer. Able to sense data, process it and use the results to control relays, motors, solenoids etc. Can monitor 10 analogue voltages. Drive 8 digital outputs.
K2805
Limited stock.

E $23.98

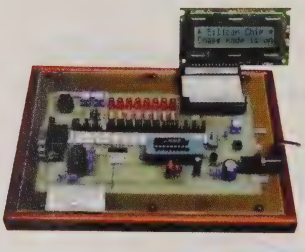


PIC Programmer Kit

SILICON CHIP

With the Silicon Chip PIC Programmer Kit you can Program popular PICs as well as serial EEPROMs. Programs all the latest 8-pin and 18-pin devices, including the PCI16F628A and PIC12F629
K3610

E $69.77

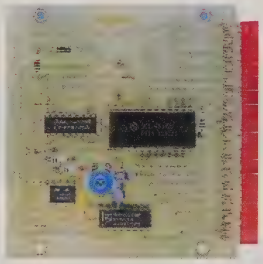


PIC Programmer Kit

SILICON CHIP

This combined PIC programmer and test bed supports PIC16C84, PIC16F84 and PIC16F84A microcontrollers. Simple programming via windows-based software. Kit supplied with PCB, LCD, all components, and instructions.
K3603
Limited stock.

D $99.94



Knightrider Scanner Kit

With this kit you can now simulate the car KITT in the TV series Knightrider.
PCB carries a row of 16 LEDs which are scanned back and forth continuously.
K3168
Limited stock.

E $15.94

Digital Multimeter Kit

3.5 Digit display. Supplied with all components, hardware, PCB, multimeter plastic case, LCD display, 9V battery and test leads. Measures voltage AC/DC, DC current to 10 amps, resistance 200R to 2000K. Diode, continuity and transistor test.
K1044
Limited stock.

D $24.88

SILICON CHIP

ESR Meter Kit

In-circuit testing, made possible by using 100mV test voltage which will not forward bias diodes or transistors.
K7214
Limited stock.

D $59.88

50Mhz Frequency Meter Kit

The 50MHz Freq Meter Kit features a 16 character LCD readout with Automatic Hz, kHz or Mhz indicator units and also includes auto ranging and two different resolution modes.
K7001
Limited stock.

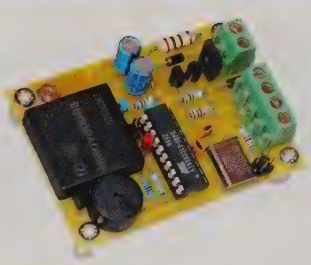
D $69.88

LED Torch Kit

Now you can build a solid-state torch with a white LED. You will receive high brightness with cool white light, low battery drain. Kit is supplied with all components, including white LED, PCB and mini torch.

K3018

E $14.88



SILICON CHIP

Security Module Kit

The Silicon Chip RFID Security Module kit requires no physical contact and no batteries are needed.

K7215

E $74.88

Energy Meter

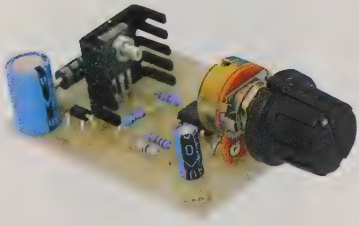
SILICON CHIP

Displays energy cost in dollars and cents. Brownout detection and power switching.

K7217

Limited stock.

D $147

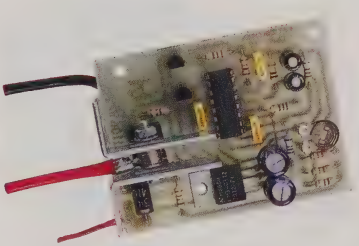


DC Motor Controller Kit

Circuit is designed to control 12VDC mini drill motors or lights with currents up to 1 amp. Employs the pulse-width modulation (PWM) technique to send bursts of current to the motor, providing an efficient means of varying motor speed.

K3070

E $19.33



DC Speed Controller Kit

Provides high current speed control for 12 and 24V DC systems. Maximum current 20 amps. Pulse-width modulated. Ideal for controlling 12V DC motors in cars (e.g. pumps for fuel injection, water⁄air intercoolers and water injection systems).

K3072

E $28.36

Car Battery Monitor Kit

Simple and functional kit to monitor your car battery. The state of charge is shown by an LED bar graph. Levels range from under-charged to optimum charge levels to over-charged. Supplied in short form with PCB and components.

K4611

Limited stock.

E $9.98

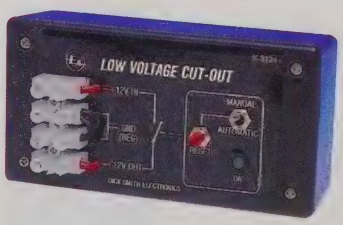
DEGREE OF SIMPLICITY

Easy Designed for kit builders with little experience - you only need to know how to solder and the basic principles of electronics. (E)

Detailed These are slightly more complex kits which require a bit more skill, and a reasonable knowledge of electronics and electricity. (D)

MAINS WARNINGS!

Kits marked with this symbol involve 230V AC mains power wiring. Please note that handling, testing and operating mains-powered equipment can be dangerous when basic safety rules are not followed. If you're inexperienced or not confident in working with mains-powered circuits, we strongly recommend that you DO NOT attempt these kits!



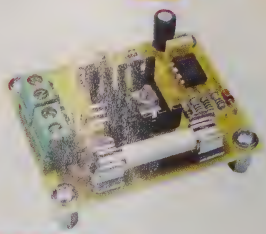
Low-Voltage Cut-Out Kit

Ideal for car or boat when powering external accessories. Disconnects the load from the battery once the voltage drops to a predetermined level. Adjustable drop-out voltage: 10.9 to 11.9 volts (nominal).

K3124

Limited stock.

E $19.88



SILICON CHIP

Micropower Battery Protector Kit

Protect expensive batteries with this mini-sized, micro-powered electronic cut-out switch. Automatically reconnects load when battery is recharged. Suitable for use with 4.8V - 12.5V batteries, 10A maximum rating.

K3132

E $29.94

Battery Replacement Guide

Type	DSE Cat#	Voltage	Size	Chemistry	Replaces						
Alkaline											
E90		1.5	N	Alkaline	LR1	AM5	MN9100		4001	L20	910A
E91	S-7227	1.5	AA	Alkaline	LR6	AM3	MN1500	15A	4006	L40	
E92	S-7226	1.5	AAA	Alkaline	LR3	AM4	MN2400	24A	4003	L30	
E93	S-7228	1.5	C	Alkaline	LR14	AM2	MN1400	14A			
E95	S-7229	1.5	D	Alkaline	LR20	AM1	MN1300	13A	4020	L90	
E96	S-3275	1.5	AAAA	Alkaline							
522	S-7230	9	Radio	Alkaline	6LR61	6AM6	MN1604	1604	4022	6L10	6LF22
Lantern Batteries											
509		6	'Dolphin'	Carbon Zinc	4R25S	4F	908	M908	431	4R25	996
529		6	'Dolphin'	Alkaline	4LR25	908A	MN9080	509	1209		
731	S-7353	6	'Big Jim'	Carbon Zinc	4R25S-2	4F2	918	M918	4R25-2991		
732		12	'Big Jim'	Carbon Zinc	8R25	9FD	926	M926	TW2		
1209	S-7352	6	'Dolphin'	Carbon Zinc	4R25P	4F	908D	H4R25	430	96PP	509
1231		6	'Big Jim';	Carbon Zinc	4R25P-2	4F2	918D	H4R25-2	731		
Photographic/Special Purpose											
S76		1.5		Silver Oxide	GM13	G13	RS76	MS76	EPX76		
GP23A	S-7423	12		Alkaline							
J539		6		Alkaline	7K67	867	4018				
A544	S-7422	6		Alkaline	4LR44	7250	PX28	537	7H34	544	
GP27A	S-3434	12		Alkaline							
E164		5.6		Mercury Oxide		T164	HM-4N	TR164	V164PX		
E400N		1.3		Mercury Oxide		T400N	H-B	RM400R	V400PX		
E401		1.4		Mercury Oxide		RM401H	RM401				
EL2CR5	S-7348	6		Lithium	2CR5						
EL223AP	S-7338	6		Lithium	DL223A	BR-P2	CR-P2				
EPX675		1.35		Mercury Oxide		PX675	HS-C	H-C	RPX675	4677	
Calculator/Games											
A76	S-7444	1.5	High Drain	Alkaline	LR44	VG13A	RW82	4276	4176	EPX76	G13
					S76	357	AG13	5244			
186	S-7443	1.5	High Drain	Alkaline	LR43	VG12GA	FW84	4278	8007	GP86	G12
					548	386	AG12	10L124	SR43W	86A	D386
189	S-7445	1.5	High Drain	Alkaline	LR54	V10GA	RW89	4274	88019	GP89	GP10
					289	389	10L122	SRW1130	LR1130	A120	89A
EL123AP	S-7337	3		Lithium	CR123A	BR123A	DL123A				
ECR1220	S-3337	3	Low Drain	Lithium	CR1220	BR1220	DL1220				
ECR1616	S-7126	3		Lithium	CR1616	BR1616	DL1616				
ECR2016	S-3332	3		Lithium	CR2016	BR2016	DL2016				
ECR2025	S-3330	3		Lithium	CR2025	BR2025	DL2025				
ECR2032	S-3331	3		Lithium	CR2032	BR2032	DL2032				
Watch/Hearing Aid											
AC13E	S-3039	1.4		Zinc Air	DA13	L13Z	AC13	13HPX	R13ZA		13A
AC312E	S-3040	1.4		Zinc Air	DA312	L312ZA	AC312	312HPX	R312ZA	312A	
AC675E	S-3038	1.4		Zinc Air	DA675	L6752A	AC675	675HPX	R6752A		
357	S-3293	1.5	High Drain	Silver Oxide	G13	J	SR44W	541	D357	SR44	7
362		1.5	Low Drain	Silver Oxide	G11	SR721SW	532	TR721SW	19		
364	S-7454	1.5	Low Drain	Silver Oxide	G1	SR621SW	531	TR621SW	31		
371	S-7455	1.5	Low Drain	Silver Oxide	SR69	SB-AN	V371	SR920SW	30		
377	S-7456	1.5	Low Drain	Silver Oxide	BA	SR626SW	D2V	37	39	V377	
379		1.5	Low Drain	Silver Oxide	SR521SW	JA	V379	50			
381		1.5	Low Drain	Silver Oxide	SR1120SW	SB-DS	34	V381			
384		1.5	Low Drain	Silver Oxide	SR41SW	527	D384	TR41SW	10		
386	S-3295	1.5	High Drain	Silver Oxide	G12	H	SR43W	548	D386	SR43	186
389	S-3292	1.5	High Drain	Silver Oxide	G10	SR1130W	554	D389	SR54	189	17
390		1.5	Low Drain	Silver Oxide	SR1130SW	SB-AU	11	V390			
395	S-7461	1.5	Low Drain	Silver Oxide		SR927SW	394	D394		SB-A4	280-17
392	S-7459	1.5	High Drain	Silver Oxide	G3	K	SR41W	547	D392	SR41	TR41W
393		1.5	High Drain	Silver Oxide	G5	F	546	D393	15		
397		1.5	Low Drain	Silver Oxide	G2	SR726SW	536	TR726SW	26		

Please Note
Not all devices shown in this section are stocked by Dick Smith Electronics. While every effort is made to ensure that the data is correct and as up-to-date as possible, you should check the manufacturer's data sheet and you should seek further advice before you act on this information.

Capacitors

Capacitors may be marked to show their value, voltage rating, accuracy, temperature stability and other information. Most capacitors are not marked with all of these, however, the value and voltage rating are usually given. Identification can be difficult because of the variety of systems in use.

Units

The unit of capacitance is the Farad, but this unit is too large in practice. Commonly used smaller units are the microfarad (abbreviated uF), nanofarad (nF) and picofarad (pF). The section on decimal multipliers shows the relationship between these.

Some capacitance values are commonly expressed by only one unit while others can be expressed under two or more units, e.g. 1uF would rarely be called 1000nF and never 1,000,000-pF, even though these are equivalent. However, 0.0047uF is often expressed as 4.7nF, or as 4700pF.

Value

Larger capacitors are marked in microfarads and indicate this by the abbreviations 'uF', 'u' or even the obsolete 'MFD'. Smaller capacitors are marked in nanofarads or picofarads and may abbreviate the unit to 'n' or 'p'.

If the value contains a decimal point the 'u','n' or 'p' is sometimes put in place of the decimal point. Therefore a 4.7pF capacitor can be marked as 4p7.

If no unit is given, a judgement, based on the capacitor's physical size, must be made to determine which unit is intended.
For example, a small ceramic capacitor marked '4.7' is probably 4.7 pF, whereas a large plastic capacitor marked '4.7' is more likely to be 4.7uF. If the value is in nF then this is invariably shown.

Another marking system uses 3 numeric digits to indicate the value in picofarads. The first two digits represent the first two digits of the value and the third digit is the multiplier or number of zeroes.

For example, a capacitor marked 104 would be read as 1, 0, 0000. This would be formatted as 100,000 pF and would commonly be known as 100nF or 0.1uF. Likewise a capacitor marked 472 would be 4700pF, also known as 4.7nF or .0047uF.

A similar system represents these 3 digits using colours taken from the resistor code, instead of numbers.

Some common values and their possible markings:

Microfarads	Nanofarads	Picofarads	EIA Code
0.0001uF*	0.1n*	100pF	101
0.00022uF*	0.22n (n22)	220pF	221
0.001uF	1n (1n0)	1,000pF	102
0.0033uF	3.3n (3n3)	3,300pF	332
0.01uF	10n	10,000pF*	103
0.047uF	47n	47,000pF*	473
0.1uF (u1)	100n	100,000pF*	104
0.82uF (u82)	820n	820,000pF*	824
1.0uF (1u0)	1000n*	1,000,000pF	105

* Not normally expressed in this form.

Voltage Rating

Voltage rating is usually marked and is often identified by the symbol 'V'. Most electrolytic capacitors clearly indicate their voltage rating. Polyester capacitors usually show the voltage rating but often omit the 'V' symbol. Small ceramic capacitors often show no voltage rating.

If the capacitance and voltage rating are both marked, a unit is also marked for at least one of the quantities so that the two cannot be confused.

Tolerance

Tolerance indicates how close a capacitor's actual value is likely to be to its marked value.

A tolerance can be marked numerically, as a code consisting of a single letter, or, on colour-coded capacitors, as a 4th coloured band. The code letter is usually placed immediately after the value. Commonly used tolerance codes are:

Code	Colour	Tol	Code	Colour	Tol
A	–	+20-10 (2)	L	–	+/-15%
C	red	+/-0.25pF (1)	M	black	+/-20%
D	green	+/-0.5pF (1)	N	–	+/-30%
E	white	+/-1.0pF (1)	P		+100 -0
F	brown	+/-1%	Q (2)	–	+30 -10
G	red	+/-2%	S	–	+50 -20
J	green	+/-5%	W	–	+50 -10
K	white	+/-10%	W (2)	–	+40 -20
			Z	grey	+80 -20

(1) used on capacitors <=10pF (2) used on electrolytic capacitors

Polarity

Polarity sensitive capacitors, such as electrolytics, are usually marked with a '+' or '-' symbol adjacent to one lead to indicate polarity. Thomson tantalum capacitors may have a triangular logo to indicate the positive lead, instead of the '+' symbol.

Temperature Characteristics

All real capacitors exhibit some change in value with varying temperature. Some ceramic types exhibit fairly linear changes and are useful as temperature compensating elements in AC circuits.

The temperature coefficients of these types may be marked in letter codes or designated by a coloured spot.

Tempco	EIA Code	JIS Code	Colour Code Code	Tempco ppm/°C
P100			red/violet	+100
NP0	C0G	C	black	0
N30	S1G	H		-30
N033	S1G		brown	-33
N075	U1G		red	-75
N080	U1G	L	red	-80
N150	P2G	P	orange	-150
N220	R2G	R	yellow	-220
N330	S2H	S	green	-330
N470	T2H	T	blue	-470
N750	U2J	U	violet	-750
N1500	P3K	W	orange/orange	-1500
N2200	R3L			-2200
P350/N1000	SL	SL		+350 to -1000

Capacitors using the JIS code sometimes have a second letter to designate the temperature coefficient's tolerance.

Letter	Tempco Tolerance
G	+/-30ppm/°C
H	+/-60ppm/°C
J	+/-120ppm/°C
K	+/-250ppm/°C
L	+/-500ppm/°C

For example, a capacitor marked "CH" would have a temperature coefficient of between +60ppm/°C and -60ppm/°C ("C"=0, "H"= +/-60ppm/°C).

Ceramic capacitors with non-linear temperature coefficients sometimes use a 3-digit code to indicate – their operating temperature range and their stability over that range.

The 1st character indicates minimum operating temperature, the 2nd, maximum temperature and the 3rd gives the stability over this temperature range.

1st Character	Min Temp °C	2nd Character	Max Temp °C
X	-55	5	+85
Y	-30	7	+125
Z	+10		

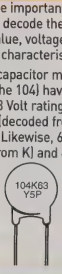
3rd Character	Stability (%)
F	+/-7.5
P	+/-10
R	+/-15
S	+/-22
T	+22/-33
U	+22/-56
V	+22/-82

An example of this is the common 'Z5U' type used in bypass applications. This capacitor operates over the +10° to +85° temperature range and exhibits a stability of +22 to -56% over this temperature range.

Putting it all together

Knowing how the important information is likely to be marked, we can decode the markings on a capacitor and determine its value, voltage rating, tolerance and sometimes its temperature characteristic.

For example, a capacitor marked 104K 63V Y5P will be 0.1uF (decoded from the 104) having a +/-10% tolerance (decoded from the K), a 63 Volt rating, an operating temperature range of -30° to + 85° (decoded from Y5) and a stability of +/-10% (P) over this range. Likewise, 6n8K63 would indicate 6.8nF (from 6n8), +/-10%, (from K) and 63 Volts (from 63).



104 = 1 0 0000 pF
= 100nF = 0.1 uF
K = ± 10% Tolerance
63 = 63 Volts
Y = -30°C
5 = +85°C
P = ±10% Stability

Film capacitor types

KP Polypropylene film/foil
KS Polystyrene film/foil
KT Polyester film/foil (polyethylene terephthalate PETP)
MK Metallized plastic film (general)
MKC Metallized polycarbonate
MKP Metallized polypropylene
MKT Metallized polyester (polyethylene terephthalate, PETP)
MKT-P Metallized polyester/paper
MKY Metallized low-loss polypropylene
MKL (MKU) Metallized lacquer (cellulose acetate)

Capacitors & their uses

Aluminium Electrolytic Capacitors

Ideal for use in filtering or smoothing applications in power supplies. Also used for coupling and bypassing in audio circuits and as a timing element in non critical circuits.

Modern aluminium electrolytic capacitors have high reliability and low leakage. Special low leakage versions are available with leakage which rivals that of tantalum capacitors.

Solid Tantalum Capacitors

Offer smaller size and lower leakage than standard aluminium electrolytics.

Ceramic Capacitors

Offer low cost and high capacitance in a small physical volume. There are generally two types:

High stability, temperature compensating types for use in resonant circuit and filter applications. These have linear temperature characteristics, and their value is largely independent of voltage and frequency.

Bypass and coupling capacitors for use in less critical applications. These are less stable, have non-linear temperature characteristics and are somewhat voltage dependent.

Paper Capacitors

An original construction, now rarely used. Plastic film capacitors have replaced paper capacitors in most applications.

Polyester Capacitors

Low cost, good stability, available in a large range of values. These are the most widely used capacitors for general purpose applications.

Greencaps and MKT capacitors are examples of polyester (polyethylene terephthalate) film capacitors.

Polycarbonate Capacitors

Offer low temperature coefficient and lower dielectric losses at high frequency. Must often be chosen for temperature stability characteristics.

Polystyrene Capacitors

Usually chosen for applications requiring tight tolerance coupled with high stability. Predictable temperature coefficient used in conjunction with particular ferrite cores makes highly stable resonant circuits or oscillators.

Polypropylene Capacitors

Offer very low dielectric losses and good temperature coefficient. Used in power electronics applications, e.g. mains capacitors, switching power supplies, inverters and TV deflection circuits.

Inductors

There are a variety of marking systems for small inductors.

The value may be marked directly, with a three digit numeric code or a colour code. The tolerance may be marked directly, with a single letter, or a colour code.

The 3-digit numeric code indicates the value in microhenries. The first two digits represent the first two digits of the value and the third is the multiplier, or number of zeroes. For example, the code 472 would be interpreted as 4 7 00 uh, or 4.7mH. Likewise, 103 would represent 10mH.

Where coloured bands are used, the system is essentially the same as that used for the resistor colour code, but with the value expressed in microhenries. An exception is that some inductors include an extra, thicker band at one end to identify milspec characteristics.

Tolerance codes are usually placed after the value code. M is used to represent +/-20%, K or a silver band for +/-10%, J or a gold band for +/- 5%.

Resin-dipped radial lead types are often marked with a sequence of coloured dots. The significance of these dots is shown below.

4th Dot (Tolerance)
1st Dot
2nd Dot
3rd Dot
(Multiplier)

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MOS Handling Precautions

Modern MOS manufacturing technologies have brought new levels of circuit sophistication and convenience to the circuit Designer. However, the extremely fine geometries and very high impedances found in these devices results in them being considerably more fragile than earlier devices.

A CMOS IC input is electrically equivalent to a capacitor, of 1 to 5 pF, in parallel with a resistor of around 1 million megohms. Such a huge input impedance is prone to the build up of high electrostatic voltages, which may damage the IC through a variety of failure mechanisms.

Although most MOS devices incorporate protection networks at their inputs, at best these are only effective against static voltages of no more than about 4kV. Even the simple act of walking across a polished floor can cause a static build up on a human body of 4k – 15kV. Consequently, the following handling precautions should be adhered to at all times when handling MOS devices and circuitry.

- Never exceed the published maximum ratings specified for any device, especially a MOS part. Special care may be needed to ensure that switch-on and power down transients are contained within specified limits.
- Tie all unused MOS inputs to low-impedance, valid logic level such as Vss or Vdd.
- Only connect and disconnect test equipment to MOS circuitry while that circuitry is powered up.
- Never remove or insert a socketed MOS IC while power is applied to it.
- When MOS inputs are connected to long, noisy lines, or to circuitry operating from a different power source, series resistors (10K to 100K) should be added to protect the MOS device. In some cases this may be impractical as the added resistance may slow input rise and fall time to an unacceptable degree.
- MOS devices and circuitry should only be stored and transported in antistatic packaging.
- Nylon and similar materials, which allow the generation and build up of static charges, should never be allowed to contact MOS devices.
- MOS devices should be placed on a grounded surface and users should ground themselves to discharge any accumulated static prior to handling the devices. The use of current-limited, grounded wrist-straps is advisable.
- Similarly, soldering irons and other tools should be discharged to ground prior to using them on MOS circuitry.
- MOS devices should be mounted on PCBs after all other components have been loaded and soldered.
- Ground and supply pins of MOS ICs should be soldered before other pins.
- Air humidifiers should be employed in otherwise dry environments. Relative humidities above 40% can significantly reduce the build up of static charges.

RMS Average & Peak Relationships

The term "RMS" (root-mean-square) is often encountered in electronics publications. It is the value of a voltage or current waveform which results in the same power being dissipated in a resistive load. For example, a 240V RMS AC→ waveform, no matter what its shape, will cause the same power dissipation in a resistor as 240V DC.

The table below shows the relationship between the RMS and average values for three common waveforms for which the peak value is known. Multiplying the peak value by the factors given in the table will yield the RMS and average values.

Strictly speaking, the average value of a waveform, which is symmetrical about the zero axis, is zero. However, we often need to know the average of the absolute value of a waveform, and this is the value which the table factors will yield.

Most test equipment does not directly measure RMS values. Meters typically measure average values but are scaled to provide the RMS value of a sine wave. Knowing this, we can convert the indicated reading back to the average value and then convert this to the true RMS value as long as we know the shape of the measured waveform.

Waveshape	Multiplying Factor to Convert Peak Value to:	
	RMS	Average
Sine	0.707	0.637
Square	1	1
Triangle/ Sawtooth	0.577	0.5

Japanese Semiconductors

Japanese Semiconductor part numbers that conform to JIS nomenclature provide useful information about the type of device.

The first character is a numeral which is one less than the effective number of electrodes. Therefore, diodes will begin with '1', transistors with '2'.

The second character is always 'S' to indicate the product is a semiconductor. The third character indicates the type of semiconductor:

- A High Frequency PNP Transistor
- B Low Frequency PNP Transistor
- C High Frequency NPN Transistor
- D Low Frequency NPN Transistor
- J P Channel FET
- K N Channel FET
- S Small Signal Diodes

Using this information, we can work out that a 2SC 1969 must be a HF NPN transistor, and 2SK 134 will be an N channel FET.

Conversions	
Angstroms/Nanometer	10
millimetres/inch	25.4
centimetres/foot	30.48
metres/yards	0.914
kilometres/mile	1.609
grams/ounce	28.35
kilograms/pound	0.454
litres/pint	0.567
litres/gallon	4.54
litres/cubic foot	28.32
Joules/Electron Volt	1.60210×10^{-19}
Watts/Horsepower	746
Coulombs/Watt Hour	3600

Temperature Conversion

°C = 5/9 [°F-32]

°F = 32 + 9/5 °C

Fuses

The humble fuse provides reliable and low cost protection against excessive currents which occur during overloads. There are many different types and styles of fuses, and selecting the right fuse for a particular application can be difficult.

When replacing blown fuses, try to obtain a fuse with a rating as close as possible to the original. If it is not possible to locate an exact replacement, remember this – A higher current fuse will offer less protection to the equipment, increasing the risk of damage and fire. A lower current fuse will offer more protection, but will be more prone to nuisance blowing. Therefore, it is better to substitute a lower value fuse until the correct type is obtained.

The explanations below should assist in understanding the terminology of fuses.

Current Rating indicates the current carrying capacity of a fuse under a particular set of test conditions, at 25°C. Fuses operated at higher temperatures need to be derated, and allowance must be made for any surge that occurs during switch-on. It is generally recommended that fuses be specified at 125% of normal load current in order to avoid nuisance blowing.

Voltage Rating is the maximum circuit voltage at which a fuse can be relied upon to safely interrupt an overcurrent. At voltages higher than the rating, a fuse may not be able to suppress the internal arcing that occurs after the fuse link melts. In electronic circuits, where limiting impedances ensure that the fault current is kept low so that a destructive arc cannot occur, fuses may sometimes be used beyond their specified voltage rating.

Fuse Types. The common 3AG (Size 3 Automotive Glass) fuses are 6.3mm (0.25") in diameter and 32mm (1.25") in length. 5AG fuses are 10.3mm (13/32") in diameter and 38mm (1.5") in length, while the smaller M205 fuse is 5mm in diameter and 20mm in length. Automotive 'blade' fuses have in-line blade contacts and a plastic body that is coloured coded for easy current rating identification.

Standard fast-acting fuses are designed to open very quickly during an overload. They are not designed to withstand the inrush current or switch-on surge that occurs in some equipment.

Time delay or slow-blow fuses are designed to tolerate the temporary overloads that occur during switch on, but they still blow quickly if subjected to gross overloads during faults. Slow equipment, where the initial surge can be many times the normal load current. Slow blow fuses and fast acting fuses are not interchangeable due to their different time characteristics.

It should be understood that the overload needed to cause even a fast-acting fuse to open quickly must be of the order of 200% or more. An overload of only 35% (ie 4A through a 3A fuse) could take an hour to open a fuse.

Multimeter Safety Ratings

Once only found in laboratories, multimeters have become so affordable that they are now common and in general use. However, not all multimeters have the same ability to withstand surge voltages. Thus a multimeter that may be perfectly suited to making measurements in low power signal circuits, could become hazardous if connected to an ordinary mains power outlet.

The international standard IEC1010 specifies safety requirements for measuring equipment. One of the requirements is that the input terminals of a complying meter be marked with the overvoltage category for which the meter is suitable. These categories are based on the overvoltages that may occur at various points in the main distribution systems, and are listed here:

Cat I Signal level, for example in electronic and telecommunications circuits not directly connected to the mains supply where overvoltages and the available energy are limited to low values. Impulse test voltage for 240V circuits: 500V.

Cat II Local level, for example at a general-purpose power outlet, or at appliances or portable equipment directly connected to the mains supply. Impulse test voltage for 240V circuits: 2500V.

Cat III Distribution level, for example at a power distribution board or at appliances connected a short distance from the distribution board. Impulse test voltage for 240V circuits: 4000V.

It can be seen that to measure the mains voltage at a power point, a meter with a Cat II or higher rating is required. To make a measurement at a switchboard, a meter with a Cat III rating is needed. If a multimeter with a lower, or no category rating is connected to the mains supply, a transient overvoltage caused by a switching action, or by lightning, may result in insulation breakdown and the creation of an internal arc. Because the mains supply can provide enormous currents, once a surge-induced arc commences, a huge amount of energy is available to cause destruction, and possible injury to the user.

A multimeter designed for a particular overvoltage category will incorporate appropriate insulation between internal conductors to prevent electrical breakdown should an overvoltage occur. Since this insulation often consists of air gaps between conductors, meters designed for higher overvoltage categories need more space around the input terminals and circuitry. This presents a design challenge, particularly as manufacturers try to include as many ranges and features as possible into new multimeter.

IEC 1010 compliant multimeters rated for category II or III tend to be more expensive, and sometimes have less ranges of features than non-compliant meter. Therefore, it is important to carefully consider the intended use of a multimeter before deciding on a particular model. If the meter is intended for making measurements on low power, low voltage electronic circuits, a low cost feature-packed non-IEC1010 complainant meter will offer the best value. However, if the meter is to be used to make measurements on mains powered circuits, there is no substitute for an appropriately rated IEC1010 compliant meter.

Handy Constants		
Natural logarithm base	e	2.71828
ln (x)/log (x)		2.3026
Pi		3.14159265
Pi (for Basic Programmers)		4 x ATN (1)
0dBm		1mW
0dBm voltage in 600 ohms		774.6mV
0dBm voltage in 50 ohms		223.6mV
dBSPL reference level		20uPa
Charge on electron	e	1.60210×10^{-19}C
Absolute zero	0K	-273.16°C
Speed of light in Vacuum	c	2.997925×10^{8}ms^{-1}
Speed of Sound	c	
- In air @ 0°C		331.6ms^{-1}
- In air @ 20°C		343ms^{-1}
- In fresh water @ 20°C		1481ms^{-1}
- In sea water @ 13°C		1500ms^{-1}
Density of air @ 20°C	p0	1.293kgm^{-3}

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Electronic Formulas

Capacitors & Inductors Reactance & Resonance

Like resistors, capacitors and inductors can be used to impede the flow of current in a circuit. However, unlike resistors, the impedance of these components varies with frequency. The impedance of an inductor increases with increasing frequency whereas the impedance of a capacitor increases with decreasing frequency. While the impedance of a resistor is termed resistance, the impedance of capacitors and inductors is termed reactance. The reactance of a capacitor can be calculated from the formula:

$$Xc = \frac{1}{2\pi f C}$$

For an inductor the formula becomes : $X_L = 2\pi fL$ where X_c is the capacitive reactance in ohms, X_L the inductive reactance in ohms, C is the capacitance in farads, L is the inductance in henries and f is the applied frequency in Hz.

Because reactive impedances are imaginary and resistive impedances are real, they cannot be added numerically. The total impedance of a resistor in series with a reactive component is given by: $z = \sqrt{X^2 + R^2}$

Where Z is the complex impedance in Ohms, X is the capacitive or inductive reactance and R is the resistance of the resistor in Ohms.

When an inductor and a capacitor are placed in parallel, at a particular frequency, termed the resonant frequency, the magnitude of their reactances will be equal and the parallel network will have a very high impedance which decreases either side of the resonant frequency. If the components are placed in series, the network will have a very low impedance which increases at either side of the resonant frequency. The resonant frequency of an LC network is given by:

$$f = \frac{1}{2\pi \sqrt{LC}}$$

Decibels

Contrary to much popular usage, the decibel (dB) is not actually a unit of any particular quantity, but rather an expression of the ratio between two quantities, such as power, voltage, current and acoustic pressure.

Many sensors, including our own ears respond to stimuli in a logarithmic fashion, allowing them to detect a huge range of intensities. As the dB compares the logarithms of quantities, it agrees with our perceptive comparisons.

To calculate the ratio, in dB, of two power levels, P1 and P2, the formula is:

$$dB = 10\log (P1/P2)$$

If the quantities are voltages, currents or sound pressure levels, X1 and X2, the formula becomes:

$$dB = 20\log (X1/X2)$$

If the quantities, X1 and X2, are both measured in the same impedances, their dB ratio will be numerically equal to the dB ratio of their equivalent powers. If their impedances, Z1 and Z2, are unequal, the dB ratio of their powers can be found from:

$$dB = 20\log (X1/X2) + 10\log (Z2/Z1)$$

Negative dB values result when P1 (or X1) is less than P2 (or X2), while positive values indicate that P1 (or X1) is greater than P2 (or X2). Although the dB is not an absolute unit, certain absolute units using the dB scale have been devised. These include dBuV, dBm and dBSPL. dBuV is a logarithmic expression of a voltage compared to 1uV (microvolt). Thus, 76 dBuV is equivalent to 6.31 mV (millivolts).

dBm is an expression of a power level compared to 1mW (milliwatt). -20dBm is therefore equivalent to 10uW. Furthermore, because the unit dBm is specifically a measure of power, 0dBm represents 775mV in a 600 ohm impedance but 224mV in a 50 Ohm impedance.

dBSPL is a measure of sound pressure level.

Although usually referred to 20.4uPa (micropascals), other reference levels may be specified. Using 20uPa as a reference, 1 Pascal equates to 93.8 dBSPL.

Inductor Design

There are no simple, generalised equations for inductor design. However, equations for a few special cases will allow inductors to be designed for a wide range of applications.

1 Single-layer air cored coils of length at least equal to radius. Useful in RF applications.

$$L = \frac{N^2 r^2}{254\,(0.9r + l)}$$

where
L = inductance in uH
N = number of turns
l = coil length in mm
r = coil radius in mm

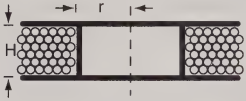
2 Multi-layer air cored coils of height equal to inner radius. Useful for loudspeaker crossovers etc.

$$H = 0.34\sqrt{\frac{L}{R}}$$

$$N = 19.9\sqrt{\frac{L}{H}}$$

$$d = \frac{0.841H}{\sqrt{N}}$$

where
L = inductance in uH
N = number of turns
H = coil height in mm
d = wire diameter in mm
R = coil's d.c. resistance in ohms



3 Multi-layer air cored similar to (2) but with height equal to one half of the coil's inner radius.

$$H = 0.323\sqrt{\frac{L}{R}}$$

$$N = 13.2\sqrt{\frac{L}{H}}$$

$$d = \frac{0.736H}{\sqrt{N}}$$

Where the symbols have the same meaning as in (2).

4 Coils wound on high permeability core materials having a closed magnetic loop, such as ferrite toroids, or 'E' cores.

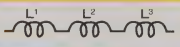
$$N = T\sqrt{\frac{L}{A_L}}$$

where
L = inductance of coil
A_L = the inductance of T turns of the particular core

5 For coils wound on high permeability core materials having an open magnetic loop, such as ferrite screw cores, the coil permeability is dominated by the large air gap, not the core permeability. Coil design is based on the formula for air cored coils as shown in 1 above. The increase in inductance due to the presence of the core material generally needs to be determined by trial and error, but the final inductance is typically 2 or 3 times the air cored inductance.

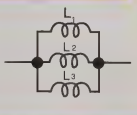
Inductors in Series

$$L_T = L_1 + L_2 + L_3 + \dots$$



Inductors in Parallel

$$L_T = \frac{1}{\frac{1}{L_1} + \frac{1}{L_2} + \frac{1}{L_3} \dots}$$



Two inductors in parallel

$$L_T = \frac{L_1 \times L_2}{L_1 + L_2}$$

Circuit Laws

Ohm's Law

The relationship between voltage, current and resistance in a circuit is defined by Ohm's law, which may be simply stated by the formula:

$$E = I \times R$$

where E is in Volts, I is in amps and R is in Ohms.

This can be turned around to look like:

$$I = \frac{E}{R} \qquad R = \frac{E}{I}$$

Power in a Circuit

In a circuit incorporating resistive components only:

$$P = E \times I$$

where P is in Watts, E is in Volts and I is in Amps.

Note: RMS values of E & I must be used for alternating current circuits.

This can be combined with Ohm's law to yield:

$$P = I^2 \times R \quad \text{or} \quad P = E^2/R$$

where R is Ohms.

For an AC circuit containing non-resistive components,

$$P = E \times I \times PF$$

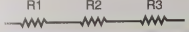
Where PF is the Power Factor: the ratio between the real and apparent power in the circuit. For sinusoidal voltages and currents, the power factor is equal to the cosine of the phase angle between them. The power factor can be less than or equal to one.

Resistors in Series

Resistors in a series circuit are simply added together to find the total resistance. In other words, a 10 Ohm, 150 Ohm and 1000 Ohm-resistor connected in series would be the equivalent of a single 1,160 Ohm resistor.

The formula is:

$$R_T = R_1 + R_2 + R_3 + \dots$$



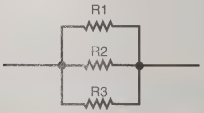
Resistors in Parallel

Resistors in a parallel circuit are a little more difficult. The formula to use is:

$$R_T = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} \dots}$$

Two resistors in parallel:

$$R_T = \frac{R_1 \times R_2}{R_1 + R_2}$$



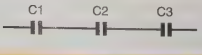
Capacitors in Series

Capacitors in series, on the other hand, are similar to resistor in parallel. You add the reciprocals:

$$C_T = \frac{1}{\frac{1}{C_1} + \frac{1}{C_2} + \frac{1}{C_3} \dots}$$

Two resistors in parallel:

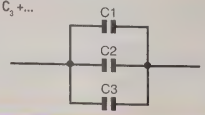
$$C_T = \frac{C_1 \times C_2}{C_1 + C_2}$$



Capacitors in Parallel

Capacitors behave exactly the opposite to resistors; when capacitors are in parallel, you add them:

$$C_T = C_1 + C_2 + C_3 + \dots$$



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Wire & Coaxial Cable Specifications

Type	NoMINAL IMPEDANCE ZO	Outer DIAMETER (mm)	Nom. Attenuation (dB/100m) 50 MHz	100 MHz	200 MHz	400 MHz	1GHz	Vel. Factor %	Cap. pF/m	Volt. Vrms
RG-6/U	75	6.85	4.9	6.9	10.2	14.4	19.7	78	57.2	-
RG-8/U	52	10.3	5.2	7.2	10.5	15.4	29.2	66	96.8	5000
RG-9/U	51	10.67	5.2	7.2	10.5	15.4	29.2	66	98.4	5000
RG-11/U	75	10.29	4.3	6.6	9.5	13.8	23.3	66	67.3	5000
RG-58/U	53.5	4.95	10.2	14.8	22.3	32.8	55.8	66	93.5	1900
RG-58A/U	50	4.95	10.8	16.1	23.9	37.7	70.5	66	101	1900
RG-58C/U	50	4.95	10.8	16.1	23.9	37.7	70.5	66	101	1900
RG-59/U	73	6.15	7.9	11.2	16.1	23.3	39.4	66	68.9	2300
RG-59B/U	75	6.15	7.9	11.2	16.1	23	39.4	66	67.3	2300
RG-62/U	93	6.04	6.2	8.9	12.5	17.7	28.5	84	44.3	700
RG-62B/U	93	6.15	6.6	9.5	13.8	20	36.1	84	44.3	700
RG-122/U	50	4.06	14.8	23	32.8	49.9	87	66	101	1900
RG-141A/U	50	4.83	6.9	10.5	15.4	22.6	42.7	69.5	95.1	1900
RG-142B/U	50	4.95	8.9	12.8	18.4	26.9	44.3	69.5	95.2	1900
RG-174/U	50	2.56	21.7	29.2	39.4	57.4	98.4	66	101	1500
RG-178B/U	50	1.83	34.4	45.9	62.3	91.9	150.9	69.5	95.1	1000
RG-179B/U	75	2.54	27.9	32.8	41.0	52.5	78.7	69.5	64	1200
RG-180B/U	95	3.56	15.1	18.7	24.9	35.1	55.8	69.51	49.2	1500
RG-187A/U	75	2.66	27.9	32.8	41	52.5	78.7	69.5	64	1200
RG-188A/U	50	2.59	31.5	37.4	46.6	54.8	101.7	69.5	95.2	1200
RG-196A/U	50	1.93	34.4	45.9	62.3	91.9	150.9	69.5	95.2	1200
RG-213/U	50	10.29	5.2	7.2	10.5	15.4	29.2	66	101	5000
RG-214/U	50	10.8	5.2	7.2	10.5	15.4	29.2	66	101	5000
RG-223/U	50	5.38	10.1	14.8	21	30.2	53.5	66	101	1900
RG-303/U	50	4.31	6.9	10.5	15.4	22.6	42.7	69.5	95.2	1900
RG-316/U	50	2.49	30.8	34.1	43.3	54.1	101.7	69.5	95.2	1200
BEL 9913	50	10.29	3.0	4.6	5.9	8.5	14.8	84	78.7	-

Please Note Except for Belden 9913, all specifications are referenced to MIL-C-17D/F or JAN-C-17A as applicable. Actual cables often exhibit lower losses than those specified above.

Copper Cable Characteristics

Number & Size of Strands	Nominal Conductor Area (sq. mm)	Nominal Current Rating (Amps)	Maximum Resistance per metre (ohms 35°C)	Nearest Equivalent AWG (B&S)
10 x 0.12	0.11	1.1	0.17	27
7 x 0.16	0.14	1.4	0.13	26
1 x 0.5	0.20	2.0	0.10	24
14 x 0.14	0.22	2.2	0.088	24
7 x 0.2	0.22	2.2	0.086	24
1 x 0.6	0.28	2.8	0.067	23
1 x 0.7	0.38	3.8	0.049	21
14 x 0.2	0.44	4.4	0.043	21
10 x 0.25	0.49	4.9	0.039	20
63 x 0.10	0.49	4.9	0.039	20
50 x 0.12	0.55	5.0	0.035	20
60 x 0.12	0.68	6.8	0.028	19
89 x 0.1	0.70	7.0	0.027	19
24 x 0.2	0.75	7.5	0.025	18
112 x 0.10	0.88	8.8	0.022	18
30 x 0.2	0.94	9.4	0.020	17
1 x 1.13	1.0	10.0	0.019	17
32 x 0.2	1.0	10.0	0.019	17
512 x 0.05	1.0	10.0	0.019	17
168 x 0.10	1.32	13.0	0.014	16
7 x 0.5	1.4	14.0	0.014	16
30 x 0.25	1.5	15.0	0.013	15
26 x 0.3	1.8	17.0	0.010	15
168 x 0.12	1.9	18.0	0.010	14
26 x 0.32	2.1	19.0	0.0091	14
7 x 0.67	2.5	22.0	0.0077	13
1 x 1.78	2.5	22.0	0.0076	13
252 x 0.127	3.2	29.0	0.0059	12
41 x 0.32	3.3	30.0	0.0057	12
315 x 0.12	3.6	30.0	0.0053	12
630 x 0.12	7.13	50	0.0027	9
1666 x 0.12	18.84	120	0.0010	5

Note The nominal current ratings are intended as guidelines for low power, electronics, communications and control applications only.

Properties of Copper

(Based upon the IEC International Annealed Copper Standard.)

Volume Resistivity @ 20°C
0.0000017241 Ohm-cm

Mass Resistivity @ 20°C
0.15328 Ohm-grams/sq. metre

Temperature Coefficient @ 20°C
0.0039

Tensile Strength
2350 kg/sq. cm

Melting Point
1083°C

Winding Wire Data

B&S	SWG Gauges	Metric mm	Dia. mils	Ohms per 1000ft	Dia. mm	Ohms per km
12	-	-	80.81	1.588	2.053	5.210
-	14	-	80.00	1.658	2.032	5.440
-	-	2.000	78.74	1.673	2.000	5.448
-	15	-	72.00	2.001	1.829	6.563
13	-	-	71.96	2.003	1.828	6.572
-	-	1.800	70.87	2.065	1.800	6.775
14	-	-	64.08	2.525	1.628	8.284
-	16	-	64.00	2.532	1.626	8.307
-	-	1.600	62.99	2.614	1.600	8.575
15	-	-	57.07	3.184	1.450	10.47
-	17	-	56.00	3.307	1.422	10.85
-	-	1.400	55.12	3.414	1.400	11.20
16	-	-	50.82	4.016	1.291	13.18
-	-	1.250	49.21	4.282	1.250	14.05
-	18	-	48.00	4.501	1.219	14.77
17	-	-	45.26	5.064	1.150	16.61
-	-	1.120	44.09	5.333	1.120	17.50
18	-	-	40.30	6.385	1.024	20.95
-	-	1.000	39.37	6.691	1.000	21.95
-	20	-	36.00	8.002	0.9144	26.25
19	-	-	35.89	8.051	0.9119	26.41
-	-	0.9000	35.51	8.222	0.9000	27.10
-	21	-	32.00	10.13	0.8128	33.23
20	-	-	31.96	10.15	0.8120	33.30
-	-	0.800	31.50	10.45	0.8000	34.30
21	-	-	28.46	12.80	0.7231	41.9
-	22	-	28.00	13.23	0.7112	43.40
-	-	0.7100	27.95	13.27	0.7100	43.55
22	-	-	25.35	16.14	0.6440	52.95
-	-	0.6300	24.80	15.85	0.6300	55.3
-	23	-	24.00	18.00	0.6096	59.07
23	-	-	22.57	20.36	0.5734	66.80
-	-	0.5600	22.04	21.33	0.5600	70.00
-	24	-	22.00	21.43	0.5588	70.30
24	-	-	20.10	25.67	0.5107	84.22
-	25	-	20.00	25.93	0.5080	85.06
-	-	0.5000	19.69	26.76	0.5000	87.81
-	26	-	18.00	32.01	0.4572	105.0
25	-	-	17.90	32.37	0.4548	106.2
-	-	0.4500	17.72	33.04	0.4500	108.4
-	27	-	16.40	38.55	0.4162	126.5
26	-	-	15.94	40.81	0.4050	133.9
-	-	0.4000	15.75	41.28	0.4000	137.2
-	28	-	14.80	47.35	0.3759	155.3
27	-	-	14.20	51.47	0.3608	168.9
-	-	0.3550	13.97	53.10	0.3550	174.2
-	29	-	13.60	56.07	0.3454	184.0
28	-	-	12.64	64.90	0.3211	212.9
-	30	0.3150	12.40	67.45	0.3150	221.2
-	31	-	11.60	77.07	0.2946	252.9
29	-	-	11.26	81.83	0.2861	268.5
-	-	0.2800	11.02	85.34	0.2800	280.0
-	32	-	10.80	88.91	0.2743	291.7
30	-	-	10.03	103.2	0.2548	338.6
-	33	-	10.00	103.7	0.2540	340.2
-	-	0.2500	9.842	107.0	0.2500	351.2
-	34	-	9.200	122.5	0.2337	402.0
31	-	-	8.928	130.1	0.2268	426.8
-	-	0.2240	8.819	133.3	0.2240	437.5
-	35	-	8.400	147.0	0.2134	482.2
32	-	-	7.950	164.1	0.2020	538.4
-	36	-	7.600	179.5	0.1930	589.1
-	-	0.1800	7.087	206.5	0.1800	677.5
33	-	-	7.080	206.9	0.1799	678.8
-	37	-	6.800	224.3	0.1727	735.8

Dick Smith Electronics does not stock all cables and wires shown. Data is presented for comparative purposes.

Choose the right cable

The following 6 steps should help when trying to choose a suitable wire size for hooking up marine and auto accessories, extension speakers and the like.

1 Decide how much of the available supply voltage you are prepared to lose. All practical wires have some finite resistance, so it is impossible not to lose some voltage.

2 Divide the figure obtained in (1) by the maximum current which you expect to draw through the wire. This result is the tolerable resistance of your wiring.

3 Divide the result obtained in (2) by the total length (in metres) of the wiring loop. Include the distance from the power source to the load, and back again. This result is the maximum resistance of the desired wire in Ohms per metre.

4 From the chart above, select a wire which has a 'Resistance per Metre' figure which is equal to or less than the desired value.

5 Check that the 'Nominal Current Rating' in the table is not exceeded. If it is, then you may need to select a larger wire size with an adequate rating. While the figures given are conservative, they must not be exceeded in 240 Volt applications and may need derating in higher temperature situations.

6 Finally, when purchasing the wire, verify that its insulation is rated to withstand the voltage and temperature for your particular application.

Example You wish to install a 12 Volt, 55W light on a boat. The current drawn by the light will be (55/12) 4.6 Amps. You calculate that the length of the wiring loop is 5 metres.

Step 1 Lets say that you'll tolerate a loss of 5% of the available 12 Volt supply, i.e. 0.6 Volts.

Step 2 Divide 0.6 Volts by 4.6 Amps to obtain 0.13 Ohms.

Step 3 Divide 0.13 Ohms by 5 metres to obtain 0.026 Ohms per metre.

Step 4 Referring to the chart, you will find that 24 x 0.2 mm wire appears to be suitable as its resistance is 0.025 Ohms per metre.

Step 5 The Nominal Current Rating for this cable is 7.5 Amps and on this basis it is still suitable.

Step 6 As you are dealing with a 12V system and are able to keep the wire away from hot areas and protect it from abrasion, there is unlikely to be any problem related to the insulation.

Type	Case	Pol Mat	Vce	Vcb	Ic mA	Vces @	Ic mA	hfe	@ Ic mA	FT MHz	@ Ic mA	Ptot mW	Use	Comparable Types
BC107	TO-18	NS	45	50	100	0.25	10	110-450	2	300	10	300	G.P. S.S. Amp.	BC207, BC147, BC182
BC108	TO-18	NS	20	30	100	0.25	10	110-800	2	300	10	300	G.P. S.S. Amp.	BC208, BC148, BC183
BC109	TO-18	NS	20	30	100	0.25	10	200-800	2	300	10	300	Low Noise S.S. Amp	BC209, BC149, BC184
BC109C	TO-18	NS	20	30	100	0.25	10	420-800	2	300	10	300	Low Noise High Gain	BC209C, BC149C, BC184C
BC177	TO-18	PS	45	50	100	0.3	10	75-260	2	150	10	300	G.P. S.S. Amp.	BC157, BC307, BC212
BC178	TO-18	PS	25	30	100	0.3	10	75-500	2	150	10	300	G.P. S.S. Amp.	BC158, BC308, BC213
BC179	TO-18	PS	20	25	100	0.3	10	125-500	2	150	10	300	G.P. S.S. Amp.	BC159, BC309, BC214
BC327	TO-92VAR1	PS	45	50	500	0.7	500	100-600	100	100	10	625	Output	2N3638
BC328	TO-92VAR1	PS	25	30	500	0.7	500	100-600	100	100	10	625	Output	BC327
BC337	TO-92VAR1	NS	45	50	500	0.7	500	100-600	100	100	10	625	Output	2N3642
BC338	TO-92VAR1	NS	25	30	500	0.7	500	100-600	100	100	10	625	Output	BC337
BC546	TO-92VAR1	NS	65	80	100	0.6	100	110-450	2	300	10	500	G.P. S.S. Amp.	
BC547	TO-92VAR1	NS	45	50	100	0.6	100	110-800	2	300	10	500	G.P. S.S. Amp.	BC107, BC207, BC147
BC548	TO-92VAR1	NS	30	30	100	0.6	100	110-800	2	300	10	500	G.P. S.S. Amp.	BC108, BC208, BC148
BC549	TO-92VAR1	NS	30	30	100	0.6	100	200-800	2	300	10	500	Low Noise S.S. Amp.	BC109, BC209, BC149
BC549C	TO-92VAR1	NS	30	30	100	0.6	100	420-800	2	300	10	500	Low Noise High Gain	BC109C, BC149C
BC556	TO-92VAR1	PS	65	80	100	0.65	100	75-475	2	200	10	500	G.P. S.S. Amp.	
BC557	TO-92VAR1	PS	45	50	100	0.65	100	75-800	2	200	10	500	G.P. S.S. Amp.	BC157
BC558	TO-92VAR1	PS	30	30	100	0.65	100	75-800	2	200	10	500	G.P. S.S. Amp.	BC158
BC559	TO-92VAR1	PS	30	30	100	0.65	100	125-800	2	200	10	500	G.P. S.S. Amp.	BC159
BC639	TO-92[74]	NS	80	100	1A	0.5	500	40-250	150	130		1W	Audio O/P	MU9610, TT801
BC640	TO-92[74]	PS	80	100	1A	0.5	500	40-250	150	50		1W	Audio O/P	MU9660, TT800
BD139	TO-126	NS	80	100	1.5A	0.5	500	40-250	150	250	50	8W	G.P. O/P	40409
BD140	TO-126	PS	80	100	1.5A	0.5	500	40-250	150	75	50	8W	G.P. O/P	40410
BD262	TO-126	PS	60	60	4A	2.5	1.5A	750	1.5A	7	1.5A	36W	High Gain Dart. O/P	BD266
BD263	TO-126	NS	60	80	4A	2.5	1.5A	750	1.5A	7	1.5A	36W	High Gain Dart. O/P	BD267
BD266A	TO-220	PS	80	80	8A	2	3A	750	3A	7		60W	High Gain Dart. O/P	
BD267A	TO-220	NS	80	100	8A	2	3A	750	3A	7		60W	High Gain Dart. O/P	
BD681	TO-126	NS	100	100	4A	2.5	1.5A	750	1.5A	1		40W	Darlington O/P	BD263
BD682	TO-126	PS	100	100	4A	2.5	1.5A	750	1.5A	1		40W	Darlington O/P	BD262
BF173	TO-72[28]	NS	25	40	25			40-100	7	550	5	230	T.V. I.F. Amp.	
BF199	TO-92VAR2	NS	25	40	25			37	7	550		500	H.F. Amp.	BF180
BF463	TO-202	PS	250	250	500			40-180	30	20		2W	H.V. Med. Pwr.	
BF469	TO-126	NS	250	250	50			50	25	60	10	1.8W	G.P. High-V. Amp.	
BF470	TO-126	PS	250	250	50			50	25	60	10	1.8W	G.P. High-V. Amp.	
BFR90	SOT-37[2]	NS	15	20	25			25-250	14	5GHz	14	180	Wideband Amp.	
BFR91	SOT-37[2]	NS	12	15	35	0.3	30	25-250	30	5GHz	30	180	Wideband Amp.	
BFY90	TO-72[25]	NS	15	30	25			25-125	2	1GHz	2	200	Wideband Amp.	
BUX80	TO-3	NS	400	800	10A	1.5	5A	30	1.2A	8		100W	Deflection, High Current SW	
MJ802	TO-3	NS	90	100	30A	0.8	7.5A	25-100	7.5A	2	1A	200W	High Power Output	
MJ2955	TO-3	PS	60	70	15A	1.1	4A	20-70	4A	2.5	500	115W	G.P. Power	
MJ4502	TO-3	PS	90	100	30A	0.8	7.5A	25-100	7.5A	2	1A	200W	High Power Output	
MJ10012	TO-3	NS	400	600	10A	2	6A	100-2K	6A			175W	Power Darlington	
MJ15003	TO-3	NS	140	140	20A	1	5A	25-150	5A	2	500	250W	High Power Output	
MJ15004	TO-3	PS	140	140	20A	1	5A	25-150	5A	2	500	250W	High Power Output	
MJE340	TO-126	NS	300		500	0.75	100	30-240	50			20W	G.P. H.V. Power	
MJE350	TO-126	PS	300		500	0.77	100	30-240	50			20W	G.P. H.V. Power	
MJE2955T	TO-220	PS	60	70	10A	1.1	4A	20-100	4A	2	500	75W	G.P. Power	TIP2955
MJE3055T	TO-220	NS	60	70	10A	1.1	4A	20-100	4A	2	500	75W	G.P. Power	TIP3055
MPSA14	TO-92[72]	NS	30	30	500	1.5	100	20000	100	125	10	625	G.P. Darlington	
MPSA65	TO-92[72]	PS	30	30	500	1.5	100	20000	100	100	10	625	G.P. Darlington	
MRF629	TO-39A	NS	16	36	400			20-200	100			5W	UHF Power	
MRF660	TO-220A	NS	16	36	2.4A			20-160	250			25W	UHF Power	
PN100	TO-92[72]	NS	35	60	500	0.5	100	60-240	150	350	50	600	G.P. Amp/Switch	PN2222, 2N3643
PN2907	TO-92[72]	PS	40	60	600	0.4	150	100-300	150	200	50	625	High S. Switch	
PN200	TO-92[72]	PS	35	60	500	0.5	150	50-400	150	200	50	600	G.P. Amp/Switch	2N3638, BC214, PN3645
TIP31B	TOP-66	NS	80	80	3A	1.2	3A	25	1A	3	500	40W	Power Output	
TIP32B	TOP-66	PS	80	80	3A	1.2	3A	25	1A	3	500	40W	Power Output	
TIP142	TOP-3	NS	100	100	10A	2	5A	>1000	5A			125W	Audio Output	TIP140, TIP141
TIP147	TOP-3	PS	100	100	10A	2	5A	>1000	5A			125W	Audio Output	TIP145, TIP146
TIP2955	TOP-3	PS	70	100	15A	1.1	420	20	4A	3	500	90W	Power Output	MJE2955
TIP3055	TOP-3	NS	70	100	15A	1.1	4A	20	4A	3	500	90W	Power Output	MJE3055
2N2222A	TO-18	NS	40	75	800	1.6	500	100-300	150	300	20	500	High S. Switch	
2N3019	TO-39	NS	80	140	1A	0.5	500	50-100	500	100	50	800	H.F. Amp	
2N3053	TO-39	NS	40	60	700	1.4	150	50-250	150	100	50	2.86W	G.P. Sw	BD137
2N3054	TO-66	NS	60	90	4A	0.1	200	25-100	500	0.8	200	25W	Audio Output	TIP31B
2N3055	TO-3	NS	60	70	15A	1.1	4A	20-70	4A	2.5	500	115W	G.P. Power	BDY20
2N3563	TO-106	NS	15	30	50			20-200	8	600	8	200	RF – IF Amp	BF173
2N3564	TO-106	NS	15	30	100	0.3	20	20-500	15	400	15	200	RF – IF Amp	BF167
2N3565	TO-106	NS	25	30	50	0.35	1	150-600	1	400	1	200	Low Level Amp	BC108, BC208
2N3566	TO-105	NS	30	40	200	1	100	150-600	10	40	30	300	G.P. Amp & Sw	BC183
2N3567	TO-105	NS	40	80	500	0.25	150	40-120	150	60	50	300	G.P. Amp & Sw	BC337
2N3568	TO-105	NS	60	80	500	0.25	150	40-120	150	60	50	300	G.P. Amp & Sw	
2N3569	TO-105	NS	40	80	500	0.25	150	100-300	150	60	50	300	G.P. Amp & Sw	
2N3638A	TO-105	PS	25	25	500	0.25	50	100	50	150	50	300	G.P. Amp & Sw	BC328
2N3641	TO-105	NS	30	60	500	0.22	150	40-120		250	50	350	G.P. Amp & Sw	BC337
2N3642	TO-105	NS	45	60	500	0.22	150	40-120		250	50	350	G.P. Amp & Sw	BC337
2N3643	TO-105	NS	30	60	500	0.22	150	100-300	150	250	50	350	G.P. Amp & Sw	BC337
2N3644	TO-105	PS	45	45	500	1	300	100-300	150	200	20	300	G.P. Amp & Sw	BC327
2N3645	TO-105	PS	60	60	500	1	300	100-300	150	200	20	300	G.P. Amp & Sw	
2N3771	TO-3	NS	40	50	30A	2	15A	15-60	15A	0.2	1A	150W	Power Output	
2N3866	TO-39	NS	30	55	400			10-200	50	500	50	1W	VHF Amp	
2N3904	TO-92[72]	NS	40	60	200	0.2	10	100-300	10	300	10	310	Low Level Amp	BC167A, BF194
2N3905	TO-92[72]	PS	40	40	200	0.4	50	50-200	10	200	20	310	G.P. Amp & Sw	
2N3948	TO-39	NS	20	36	400			15	50	700	50	1W	VHF Amp	
2N4030	TO-39	PS	60	60	1A	0.5	500	25	500	260	100	800	G.P. Amp & Sw	
2N4250	TO-106	PS	40	40	100	0.25	10	250-700	0.1	50		200	Low Level Amp	BC559
2N4258	TO-106	PS	12	12	50	0.5	50	30-120	10	700	10	200	Saturated Sw	
2N4427	TO-39	NS	20	40	400	0.4	100	10-200	100	500	50	1W	VHF/UHF Driver	2N3866
2N5401	TO-92[72]	PS	150	160	6000	0.5	50	60-240	10	100	10	625	H.V. Switch	MPSL51
2N6557	TO-202	NS	250	250	500			>40	50	45		2W	H.V. Med Pwr	
2SC710	TO-92/76	NS	25	30	30			90	1	100		200	G.P. RF Amp	BFS18
2SC1306	TOP-66	NS	65	65	3A			40-200	500	300		12W	H.F. Output	2SC2166
2SC1307	TOP-66	NS	70	70	8A			20-150	2A	150		25W	H.F. Output	2SC1969
2SC1674	TO-92[74]	NS	20	30	20	0.3	10	40-180	1	600	1	250	VHF Amp	
2SC1969	TOP-66	NS	30	60	6A			10-180	10	150		20W	H.F. Output	2SC1307
2SC2166	TOP-66	NS	75	75	4A			35-180	100					
2SC2694	T-40	NS	17	35	20A			10-180	1A	800		140W	VHF Output	MRF247
2SC3355	TO-92[74]	NS	12	20	100			50-300	20	6.5GHz	20	600	UHF SS	MRF573
2SC3358	MX	NS	12	20	100			50-300	20	7GHz	20	250	UHF SS	MRF573

Note Some small signal transistors may have a TO-92 case and a "PN" prefix. The electrical specifications are the same, only the case is changed. See case outline TO-92[72] for pin detail. Not all devices in this section are stocked by Dick Smith Electronics.

Triacs

Type	CASE	VDRM	IT (r.m.s.) (A)	IFSM (A)	IGT (mA)	VGT (T = 25°C)	PG (av) (W)	IH (mA)	dv/dt (V/uS)	Comments (25°C)
BT137-500	TO-220	500	8	55	35 (70-+)	1.5	0.5	20	100	(Gate o/c)
BT139-500	TO-220	500	16	140	35 (75-++)	1.5	0.5	30	100	(Gate o/c)
BT139-600	TO-220	600	16	140	35 (75-++)	1.5	0.5	30	100	(Gate o/c)
BTA10-600B	TO-220	600	10	100	50 (100-++)			50	100 @ 400V	(Isolated Tab)
BTA41-600B	TOP-3	600	40	300	50 (100-++)	1.5	1.0	80	250	(Isolated Tab)
Q4006L4	TO-220	400	6	65	25 (50-+)	2.5 max all modes	0.9	60 max	100 typ	(Gate o/c)
SC141D	TO-220	400	6	74	50 (50 +)	2.5 "	0.5	50 max	100 typ	(Gate o/c)
SC146D	TO-220	400	10	110	50 (50-+)	2.5 "	0.5	50 max	150 typ	(Gate o/c)
SC151D	TO-220	400	15	110	50 (50-++)	2.5 "	0.5	50 max	250 typ	(Gate o/c)

FETS	Case	BVGSS V	@	IG (uA)	VGS (OFF) Min	IDss(mA) Max	@	VDS	YFS (umhos) ID (nA)	Min	Max	@	VDS	VGS Min	Max	@	VDS	mW	Ptot	Use/Comments
BF245B	TO-92 Var 1	30		1	0.5	8		15	10	6	15		15	0	3000		6500	15	300	N/CH Junction Audio to H.F.
BF981	SOT-103	>6			2.5			10	20uA	4	25		10	0	14000 typ.				225	N/CH Dual Gate MOS, VHF AMP.
BF998	SMT	>6		±10		2.5		8	20uA	2	18		10	0/4	24000 typ.			8	200	N/CH VHF/UHF Dual Gate SMT
BFR84	TO-72(2)	>6		100	1.5	3.8		10	20	55			10	0	15000 typ.			10	300	N/CH VHF Dual Gate
MFE131	TO-72(2)	±6		±10		4		15	200uA		30		15	0	8000		20000	15	300	N/CH Dual Gate MOS, VHF Amp.
MPF102	TO-92(72)	25		10	0.5	8		15	2	2	20		15	0	2000		7500	15	310	N/CH Junction – VHF
MPF105	TO-92(72)	25		1		8		15	10	4	16		15	0	2000		6000	15	310	N/CH Junction – Audio Sw.
MPF106	TO-92(72)	25		1	0.5	4		15	10	4	10		15	0	2500		7000	15	310	N/CH Junction – RF
MPF131	262	±6		±10		4		15	200uA	3	30		15	0	8000		20000	15	350	N/CH Dual Gate MOS, VHF Amp
2N4342	TO-92(72)	25		10		5		10		12	30		10	0			6000	10	180	P/CH Junction – Audio Sw.
2N5245	TO-92(77)	30		1	1.5	6		10		1	18		0		5800 typ.			10	360	N/CH VHF/UHF MIXER
2N5459	TO-92(72)	25		1	2	8		15	10	4	9		15	0	2000		6000	15	310	N/CH Junction – Audio Sw.
2N5484	TO-92(72)	25		1	0.3	3		15	10	1	5		15	0	3000		6000	15	310	N/CH Junction – VHF
2N5485	TO-92(72)	25		1	0.5	4		15	10	4	10		15	0	3500		7000	15	310	N/CH Junction – VHF
2N5486	TO-92(72)	25		1	2	6		15	10	8	20		15	0	4000		8000	15	310	N/CH Junction – VHF
3SK40	TO-72(2)	±6		±10		4		15	200uA		25		15	0			8000	15	250	N/CH Dual Gate MOS, VHF Amp.
3SK121	2-6F1A	−5			−2.5	4		5	100uA	20	45		5	0	17000 typ.			10	200	N/CH UHF GaAs Dual Gate

Power FETs

Type	Case	Ptot (W)	Vds (max) (V)	Id (max) (A)	Vgs (thres.) min	Gfs max	CISS umhos	Rds (pF)	Comment (ohms)	
BUK456-60A	TO-220	150	60	52	2.1	4	17M	2000	0.028	Inverters
BUK456-60A	TO-220	150	60	52	2.1	4	17M	2000	0.028	Inverters
BUK457-600B	TO-220	150	600	7.1	2.1	4	8M typ.	1800	1.2	Mains SMPS
BUZ71A	TO-220	40	50	13	2.1	4	4M	600	0.12	Nch Power MOSFET
IRF520	TO-220	60	100	9.2	2	4	4M	350	0.25	Nch Power MOSFET
IRFP450	TO-247	180	500	14	2.0	4.0	14M	2700	0.4	N-ch Power MOSFET
MTP3055E	TO-220	40	60	12	2	4.5	4M	500	0.15	Nch Power MOSFET
PHP6N60E	TO-220	125	600	6.5	3.0	4.0	5M	1500	1.2	Nch Power MOSFET
VN10K	TO-92(76)	1	60	0.3	0.3	2.5	100K	48	5	Nch DMOS FET
VN88AF	TO-202F	12.5	80	2	0.8	2				Nch VMOS FET
2SJ48	TO-3	100	120	7	0.15	1.45	1M	900	1	Pch Power MOSFET
2SJ49	TO-3	100	140	7	0.15	1.45	1M	900	1	Pch Power MOSFET
2SJ162	TOP-3	100	160	7	0.15	1.45	1M	900	1	Pch Power MOSFET
2SK133	TO-3	100	120	7	0.15	1.45	1M	600	1	Nch Power MOSFET
2SK134	TO-3	100	140	7	0.15	1.45	1M	600	1	Nch Power MOSFET
2SK1058	TOP-3	100	160	7	0.15	1.45	1M	600	1	Nch Power MOSFET
60N06	TO-220	150	60	60	2.0	4.0	20k	1950	0.014	Nch Power MOSFET

Small Signal Diodes

Type	Case	VR	IF (mA)	Cd (pF)	VF	@	IF (mA)	IR (uA)	@	VR	Trr (ns)	Use /Comparable Types
Germanium												
OA47	DO-7	25	110	3.5	0.45		10	100		25	70	Gold Bonded G.P. Switching
OA90	DO-7	20	45		1.5		10	450		20		G.P. Point Contact OA70, OA80
OA91	DO-7	90	50		1.9		10	180		75		G.P. Point Contact OA71, 79, 81
DSOA91	DO-7	50	30	1	1		5	200		10		G.P. OA91, 1N60
1N60	DO-7	40	30	1	0.05		0.375	200		10		AM/FM Detector
OA95	DO-7	90	50		1.5		10	110		0.75		G.P. Point Contact
Silicon												
BA102	DO-7	20		20-45	Cd Ratio 1.4	@	4V/10V					Variable Capacitance
BA234/4	DO-35	20	100	<2	1		100	0.1		15		UHF Sw.
BAW62	SOD-27	75	200	2	0.75		5	5		75	4	High Speed Silicon Sw.
BB119	DO-35	15		20-25 @ 4V	Cd Ratio >1.3	@	4V/10V					Varicap – replaces BA102
BB122	DO-35	30		12 @ 3V	Cd Ratio 5.2			0.05		28		Varicap VHF UHF
BB212	TO-92	12		500-620 @ 0.5V	Cd Ratio >22.5	@	0.5V/8V	0.05		10		AM Dual Varicap
1N914A	DO-35	75	75	4	1		10	5		75	4	Small Signal Sw. 1N4148
1N4148	DO-35	75	200	4	1		10	0.025		20	4	Small Signal Sw. 1N914A
1N4448	DO-35	75	300	4	1		100	0.025		6	4	G.P. Silicon Sw. 1N4148
5082-2800	DO-7	70	15	2	0.41		1	0.2		50	0.1	Schottky (Hot Carrier) UHF Detector, Mixer Switch

Rectifiers

Type	VR	IF (A)	IFSM (A)	VF	@	IF (A)	IR (uA)	@	VR	Use
BYX98/600	600	10	75	1.4		10	200		600	Power Rectifier Stud Mount
1N4004	400	1	30	1.1		1	5		400	G.P. Rectifier
1N4007	1000	1	30	1.1		1	5		1000	G.P. Rectifier
BY229-400	400	7	60	1.85		20				SMPS trr = 150nS
1N4936	400	1	30	1.3		1	5		400	SMPS trr = 200nS
1N5404	400	3	200	1.1		3	5		400	G.P. Rectifier
1N5408	1000	3	200	1.1		3	5		1000	G.P. Rectifier
P600M	1000	6	400	0.9		6	25		1000	G.P. Rectifier
6A10	1000	6	350	1.0		6	10		1000	G.P. Rectifier
FB5006	600	50	500	1.2 (per leg)		25	10		600	High Current Bridge
3504	400	35	400	1.2 (per leg)		17.5	10		400	High Current Bridge
P04	400	6		1.3 (per leg)		6	10		400	Medium Duty Mini Bridge
KBL04	400	4	200	1.1 (per leg)		3	10		400	G.P Bridge
KBPC804	400	8	200	1.0 (per leg)		4	10		400	High Current Bridge
KBL10/407	1000	4	200	1.1 (per leg)		2	10		1000	G.P. Bridge SIL pins
WO4	400	1.5	50	1.1 (per leg)		1	10		400	Mini Bridge
WO6	600	1.5	30	1.1 (per leg)		1	10		600	G.P Bridge
2WO6	600	2	50	1.0 (per leg)		1	10		600	G.P Bridge
DB155G	600	1.5	50	1.1 (per leg)		1	10		600	Mini Bridge DIL pins
1N5819	40	1	25	0.6		1	1mA		40	Schottky Barrier
1N5822	40	3	80	0.525		3	2mA		40	Schottky Barrier

SCRs

Type	Case	VDRM	IT (r.m.s.) (A)	IFSM (A)	IGT (mA)	VGT	PG (av) (W)	IH (mA)	dv/dt (V/uS)	COMMENTS (25°C)
BT151-500R	TO-220	500	12	100	15 max	1.5 max	0.5	20 max	200	(RGK=100)
BT169B	TO-92A	200	0.8	8	.2 max	0.8 max	0.1	5 max	25	(RGK=1k)
C103B	TO-92	200	0.8	8	.2 max	0.8 max	0.01	5 max	20	(RGK=1k)
C106Y	TO-202	30	4	20	.2 max	0.8 max	0.1	5 max	8	(RGK=1k)
C106D	TO-126/TO-202	400	4	20	.2 max	0.8 max	0.1	3 max	8	(RGK=1k)
C122D	TO-220	400	8	82	25 max	1.5 max	0.5	3 max	50	(Gate o/c)
C122E	TO-220	500	8	82	25 max	1.5 max	0.5	30 max	50 typ	(Gate o/c)
C203B	TO-92A	200	0.8	8	.2 max	0.8 max	0.01	5 max	20 typ	
C220D	TO-48	400	10	82	25 max	1.5 max	0.5	30 max	50 typ	
P0103AA	TO-92A	100	0.8		.02-.2	0.8 max	0.1	5 max	100 typ	
P0103AB	TO-92	100	0.8		.02-.2	0.8 max	0.1	5 max	100 typ	
S4008	TO-220	400	8	85	25 max	1.5 max	0.5	30 max	50 typ	(Gate o/c)
S6008L	TO-220	600	8	85	25 max	1.5 max	0.5	30 max	50 typ	(Gate o/c)
SPS420	TO-48	400	20	200	25 max	2.0 max	0.5	50 max	200	(Gate o/c)
TIC126E	TO-220	500	8		20 max	1.5 max	0.5	40 max	100 typ	(Gate o/c)
TYN608	TO-220	600	8	80	15 max	1.5 max	–	30 max	200 typ	
TYN608G	TO-220	600	8	80	25 max	1.5 max	–	45 max	500	

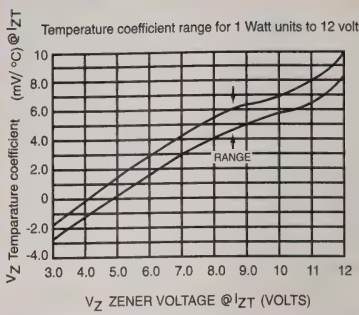
DICK SMITH ELECTRONICS That's where you go!

Type No. ▲ 400mW Series	Type No. ▼ 1 Watt Series	Nominal Zener Volt. VZ@IZT (V)	Test Current IZT (mA) 400mW	1W
1N746	1N4728	3.3	20	73
1N747	1N4729	3.6	20	69
1N748	1N4730	3.9	20	64
1N750	1N4732	4.7	20	53
1N751	1N4733	5.1	20	49
1N752	1N4734	5.6	20	45
1N753	1N4735	6.2	20	41
1N754,1N957	1N4736	6.8	18.5	37
1N755,1N958	1N4737	7.5	16.5	34
1N756,1N959	1N4738	8.2	15	31
1N757,1N960	1N4739	9.1	14	28
1N758,1N961	1N4740	10	14	25

▲ (DC Power Dissipation: 400 milliwatts @ 50°C Ambient) (Derate 3.2mW/°C above 50°C)

Type No. ▲ 400mW Series	Type No. ▼ 1 Watt Series	Nominal Zener Volt. VZ@IZT (V)	Test Current IZT (mA) 400mW	1W
1N962	1N4741	11	12.5	23
1N759, 1N963	1N4742	12	11.5	21
1N964	1N4743	13	10.5	19
1N965	1N4744	15	9.5	17
1N966	1N4745	16	8.5	15.5
1N967, 1N4112	1N4746	18	7.8	14
1N968	1N4747	20	7	12.5
1N969	1N4748	22	6.2	11.5
1N970	1N4749	24	5.6	10.5
1N971	1N4750	27	5.3	9.5
1N972	1N4751	30	5.3	8.5
1N973	1N4752	33	5.2	7.5

▼ (DC Power Dissipation: 1 W @ 50°C Ambient) (Derate 6.67mW/°C above 50°C)This range will dissipate up to 3W @ 75°C with 10mm lead length as heatsink.

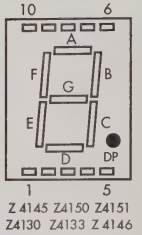


Discrete Optoelectronics

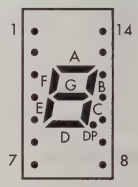
7-Segment LEDS

	LTS5303AR Z 4150	LTS5503AE Z 4151	LTS546AR Z 4145	30240A Z 4118	LSD5115 Z-4130	LSD5114 Z4133	LSD5365 Z4146
Characteristics							
Common Terminal Pol.	Cathode	Anode	Cathode	Anode	Cathode	Cathode	Anode
Digit Size	14.2mm	13.2mm	7.6mm	7.6mm	13.1mm	14.2mm	14.2mm
Colour	Orange	Red	Green	Red	Red	Orange	Red
Av. Fwd. Seg. Current	25mA	25mA	25mA	25mA	25mA	25mA	25mA
Segment Voltage	2.1	1.7	2.1	2.0	1.7	2.0	1.7
Min. Rev. Brkdn. Volt.	5	5	5	5	5	5	5
Max. Rev. Current	100uA	100uA	100uA	100uA	10uA	10uA	10uA
Seg. Intensity (typ.)	2200ucd	500ucd	2000ucd	750ucd	6000ucd	4500ucd	8500ucd
Max. Seg. Dissipation	75mW	55mW	75mW	85mW	110mW	100mW	110mW
Connections							
Seg. A	7	7	10	1	7	7	7
Seg. B	6	6	9	13	6	6	6
Seg. C	4	4	8	10	4	4	4
Seg. D	2	2	5	8	2	2	2
Seg. E	1	1	4	7	1	1	1
Seg. F	9	9	2	2	9	9	9
Seg. G	10	10	3	11	10	10	10
Dec. Pt.	5	5	7	6, 9	5	5	5
Common	3, 8	3, 8	1, 6	3, 14	3,8	3,8	3,8

Note: Not all devices in this section are stocked by Dick Smith Electronics.



Z 4145 Z4150 Z4151 Z4130 Z4133 Z 4146



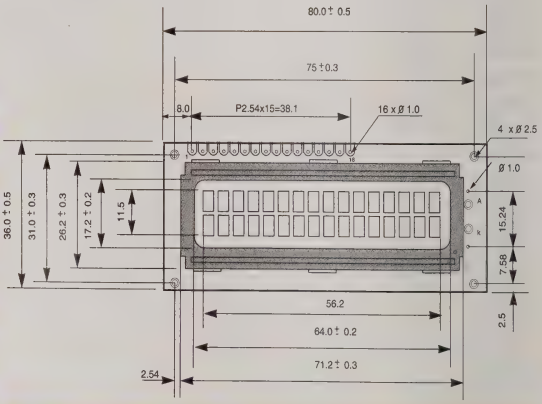
Z4103 Z4105 Z4117 Z4118

Z4170/Z4172 LCD Display Modules

The Z4170 and Z4172 are self-contained Liquid Crystal Displays (LCDs). Both modules can display 2 rows of 16 characters, and both include a CMOS interface and drive IC to enable simple connection to a 4 or 8 -bit microprocessor. 96 alpha numeric characters are available from an in-built character generator, and up to 8 characters can be user defined. The Z-4172 includes a back-light feature. A full data sheet is included with each unit.

Interface Pin Functions

Pin No.	Symbol	Function
1	Vss	Ground (0V)
2	Vdd	Logic Supply (+5V)
3	V0	Contrast Adjustment
4	RS	Data/Instruction Select
5	R/W	Read/Write Select
6	E	Signal Enable
7 – 14	D0 – D7	Data Bus
15	A	LED Backlight (Z4172 only)
16	K	LED Backlight (Z1472 only)



Z1956 Silicon P-I-N Infra Red Photo Diode

Silicon pin photo diode encapsulated in a black plastic package which acts as an infra-red filter.

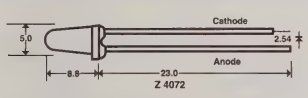
Reverse Voltage	Vr max	30V
Power Dissipation @ 25°C	Ptot	150mW
Junction Temperature	Tj	100°C
Dark Reverse Current (Vr=10V Ee=0)	Idr	30nA
Light Reverse Current (Ee=1mW/cm²)	Ilr	50uA
Wavelength of Peak Response	λ pk	940nm

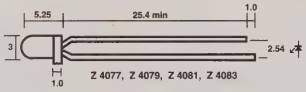
Z3235 GaAs Infra Red Emitting Diode

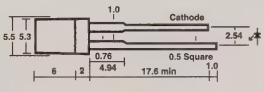
High Intensity Gallium Arsenide infra-red emitting diodes intended for remote control applications. Smoke coloured end looking encapsulation.

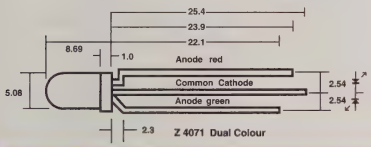
Forward Voltage	Vf	1.2V @20mA
Continuous Reverse Voltage	Vr	5V
Forward Current (d.c.)	If max	50mA
Peak Forward current (300pps, 1us pulse)	Ifpk	3A
Total Power Dissipation up to Tamb=25°C	Ptot max	100mW
Junction Temperature	λTj	100°C
Radiant incidence @ If=20mA	Eo	1.4mW/cm2
Wavelength of Peak Emission	pk	940nm

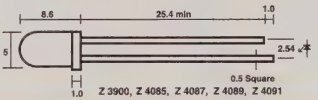
Cat No.	Colour	Nominal Size (mm)	Lens	Fwd Voltage (@ 20mA)	Max. Cont. Fwd. Current (mA)	Max. Rev. Voltage	Luminous Intensity (mcd)	@ current (mA)	Peak Wavelength
Z3800	White	3 dia	Water Clear	3.5	30	5	1500	20	460
Z3820	Blue	3 dia	Water Clear	3.5	30	5	700	20	468
Z3902	Blue	5 dia	Water Clear	3.5	30	5	1800	20	475
Z3905	Blue	5 dia	Water Clear	3.6	30	5	3000	20	475
Z3920	Green - Blue	5 dia	Water Clear	3.5	30	5	3500	20	505
Z3980	White	5 dia	Water Clear	4.0	30	5	2300	20	-
Z3981	White	5 dia	Water Clear	4.0	30	5	5600	20	-
Z3982	White	5 dia	Water Clear	5.0	20	5	8000	30	456
Z4010	Red	3 dia	Water Clear	1.9	90	5	45	25	635
Z4012	Green	3 dia	Water Clear	2.1	90	5	45	25	565
Z4013	Green	5 dia	Water Clear	3.5	30	5	10000	20	52
Z4014	Yellow	3 dia	Water Clear	2.2	60	5	45	20	583
Z4021	Red	5 dia	Water Clear	1.9	90	5	125	20	635
Z4023	Green	5 dia	Water Clear	2.2	90	5	140	20	565
Z4025	Yellow	5 dia	Water Clear	2.2	60	5	140	20	583
Z4031	Sunset Red	5 dia	Water Clear	2.0	50	5	8000	20	640
Z4033	Yellow	5 dia	Water Clear	2.0	50	5	6500	25	595
Z4060	Red	10 dia	Red Diffused	2.0	30	5	40	20	625
Z4067	Red	10 dia	Water Clear	1.9	50	5	6000	20	660
Z4068	Green	10 dia	Water Clear	3.5	30	5	7000	20	512
Z4071	Red / Green	5 dia	White Diffused	2.0	25	5	126 / 49	20	660 / 567
Z4072	Red	5 dia	Water Clear	1.8	40	4	1000	20	660
Z4074	Red	5 dia	Water Clear	1.8	40	4	2300	20	660
Z4077	Red	3 dia	Red Diffused	2.1	15	5	2	10	697
Z4079	Green	3 dia	Green Diffused	2.2	30	5	6	10	565
Z4081	Yellow	3 dia	Yellow Diffused	2.2	20	5	5	10	585
Z4083	Orange	3 dia	Orange Diffused	2.0	30	5	5	10	635
Z4085	Red	5 dia	Red Diffused	2.1	15	5	4	10	697
Z4087	Green	5 dia	Green Diffused	2.2	30	5	10	10	565
Z4089	Yellow	5 dia	Yellow Diffused	2.2	20	5	8	10	585
Z4091	Orange	5 dia	Orange Diffused	2.0	30	5	10	10	635
Z4095	Green	2 x 5	Green Diffused	2.2	30	5	1	10	565
Z4200	Red	1.8 x 5.0	Red	2.1	30	5	5.1	20	690
Z4202	Green	1.8 x 5.0	Green	2.1	30	5	4.3	20	565
Z4204	Yellow	1.8 x 5.0	Yellow	2.1	30	2	4	20	580
Z4220	Red	20 dia	Red Diffused	6.0	25	4	70	20	645
Z4222	Green	20 dia	Green Diffused	10.5	25	4	90	20	525
Z4224	Yellow	20 dia	Yellow Diffused	6.0	25	4	60	20	590
Z4230	Blue	20 dia	Blue Diffused	10.5	25	4	30	20	470

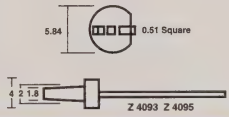












Flashing LEDs

	Z4040 Red	Z4044 Red	Z4046 Green	Units
Nominal Size	5	5	5	mm
Operating Voltage Range	3-10	3-15	3-15	V
Intensity (typ. @ 10V)	36	390	98	mcd
Peak Wavelength	660	660	567	nm
Flash Rate (approx @ 10V)	2	2.4	2.4	Hz
Duty Cycle	25	25	25	%
Max. Rev. Voltage	0.6	5	5	V

Z4801 Light Dependent resistor (LDR)

Ratings		Characteristics	
Max. Voltage	100V	Dark Resistance	> 10 M Ohm
Power Dissipation	50mW	Resistance @ 10 Lux	48-140k Ohm
(at 25°C)		Peak Spectral Response	560-620 nm

The approximate relationship between illumination and resistance is given by,

$$R = AL^{-0.85}$$

where: R = resistance, A = a constant (approx. 340-991 x 103), L = light level in Lux

Using LEDS

When using a Light Emitting Diode (LED) as an indicator, use the following formula to determine series resistance for various voltages: R = (E-Vf) x 1000/I, where R is the resistance in Ohms, E is the DC supply voltage, I is the LED current in mA and Vf is the forward voltage drop of the LED, typ. 2V

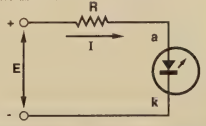
ie. With Vf=2V, LED current=20mA,

for 6V, R=220 Ohms

9V, R=330 Ohms

12V, R=560 Ohms

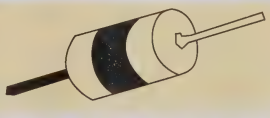
24V, R=1200 Ohms



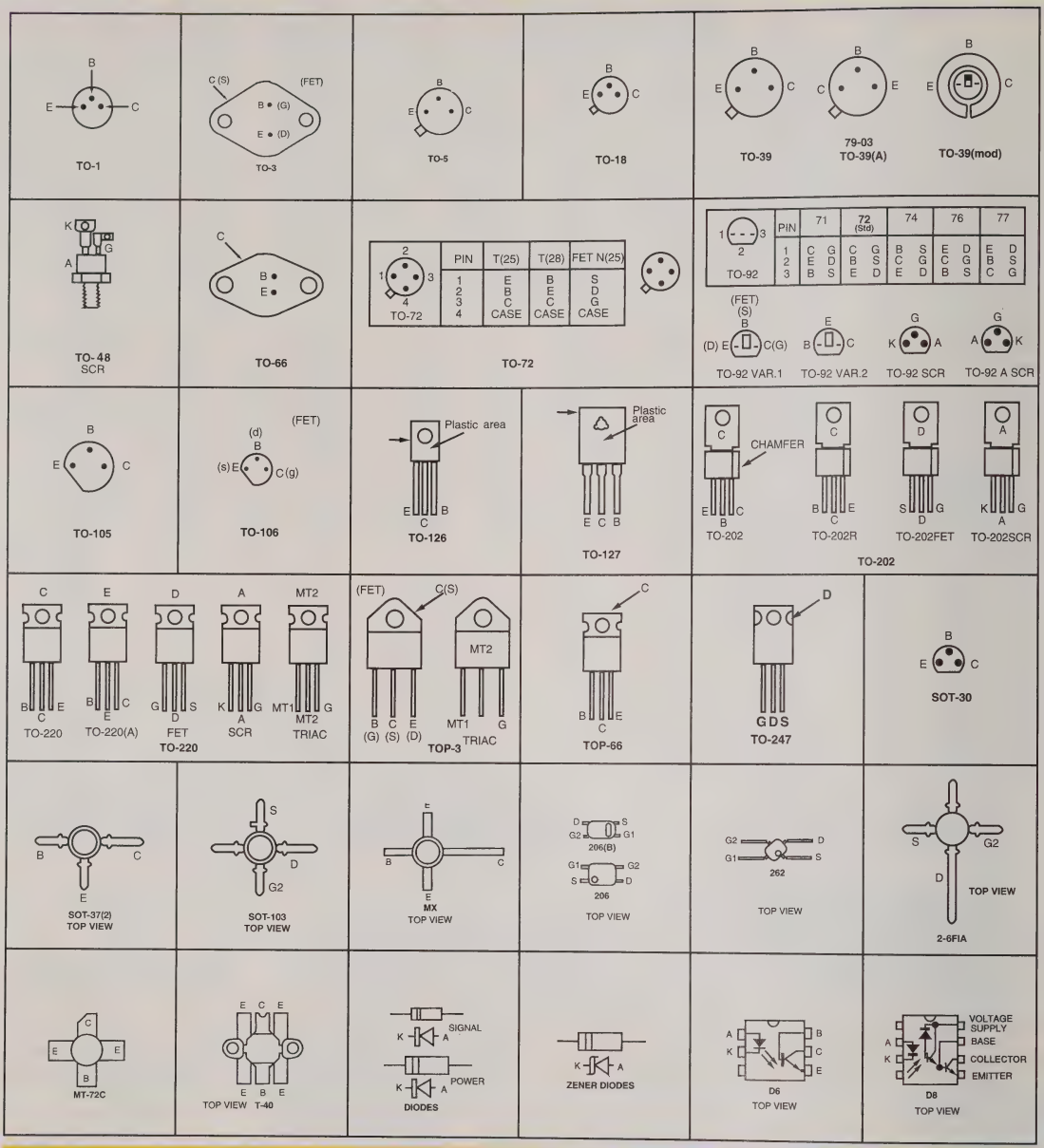
Note This does not apply to flashing LEDs. Flashing LEDs can be driven from a voltage source, ie without a resistor.

Z4710 BR-100-03 Diac

Vs	28 – 36V
$V_{SYM/VRRM}$	3V
Is (max)	100uA
Δ Vt	6V @ 10mA



DICK SMITH ELECTRONICS That's where you go!



R1797 NTC Thermistor

These Negative Temperature Coefficient (NTC) Thermistors are useful for temperature sensing, temperature compensation, automatic gain control and fluid flow monitoring. They are not for use in conducting, reducing or aggressive gases or fluids. The resistance of the R 1797 can be calculated from the formula:

R = AeB/T

where

R is the thermistor resistance in Ohms,

T is the temperature in Kelvins,

e is the natural logarithim base (2.718) and

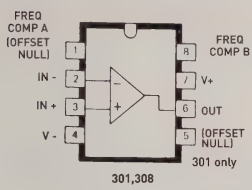
A & B are constants which should be calculated from measurements on each particular thermistor for best accuracy.

For nominal values of B and R, A is approximately 0.0277.

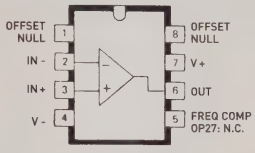
Specifications	
Maximum power dissipation:	0.5W
Operating temperature range:	
at zero power:-	25°C to 125°C
at maximum power:	0 to 55°C
Thermal time constant:	17s approx.
Resistance Value at 25°C:	100k Ohms +/-10%
B (@ 25°C and 85°C):	4500 +/-5%
Temp. Co. -5.2%/K	

Type	Device	Input Offset Volt. Max (mV)	Input Offset Current Max (nA)	Input Bias Current Max (nA)	Volt. Gain Min (Volts/V)	Unity Gain B.W. Typ (MHz)	Slew Rate Av=1 Typ (V/uS)	Output Volt. Swing R1=10k (Vs=+/-15) (V)	Supply Voltage Min (V)	Supply Voltage Max (V)	CMRR Min (dB)	Differential Input Volt. (V)	Supply Current Ta=25C (Note 1) Internal Max (mA)	Freq. Comp.
	Single Op Amps													
LM301	GP Amplifier	10	70	300	15k	1	0.5	+/-12	+/-3	+/-18	70	+/-30	3	No
LM741	GP Amplifier	7.5	300	800	15k	1	0.5	+/-12	+/-3	+/-18	70	+/-30	2.8	Yes
LM308	Low Input Current	10	1.5	10	15k	1	0.3	+/-13	+/-2	+/-18	80	+/-1.0(Note 2)	0.8	No
NE5534	Low Noise	5	400	2000	15k	10	6	+/-12	+/-3	+/-22	70	+/-0.5(Note 2)	8	No
OP27	Lo Noise Precision	0.22	135	150	450k	5	1.7	+/-11	+/-4	+/-22	96	+/-0.7(Note 2)	5.7	Yes
TL071	JFET Lo Noise	13	2	7	15k	3	13	+/-12	+/-3.6	+/-18	70	+/-30	2.5	Yes
LF351	JFET Lo Noise	13	4	8	15k	4	13	+/-12	+/-4	+/-18	70	+/-30	3.4	Yes
TLC251	Prog Lo Power CMOS	10	0.3	0.6	7.5k	0.7	0.6	7.8(Vs=10V)	1.4	18	60	+/-18	0.22	Yes
CA3130	MOSFET Input	15	0.03	0.05	50k	4	10	+/-6(Vs=+/-8)	+/-2.5	+/-8	70	+/-8	15	No
CA3140	MOSFET Input	15	0.03	0.05	20k	4.5	9	+/-12	+/-2	+/-18	70	+/-8	6	Yes
LM10C	Inc. Voltage Ref.	5	3	40	15k	0.1	*	+/-14.6	1.1	45	87	+/-40	0.27	Yes
LM3080	Transconductance	5	500	5000	5.4 mmho	2@Ao1	50	+/-12	+/-2	+/-18	80	+/-5	typ 1.1	No
LM627	Precision op-amp	0.1	25	25	4M	14	4.5	+/-14.0	+/-3.5	+/-18	120	25mA(Note 2)	4.8	Yes
	Dual Op Amps													
LM1458	GP Amplifier	7.5	300	800	15k	1	0.5	+/-12	+/-3	+/-18	70	+/-30	5.6	Yes
LM358	Low Power	9	150	500	15k	1	0.5	+/-12	+/1.5	+/-16	65	32	2	Yes
LM833	Hi-Fi	5	200	1000	30k	15	7	+/-12	+/-5	+/-18	80	+/-30	8	Yes
TL072	JFET Lo Noise	13	2	7	15k	3	13	+/-12	+/-3.6	+/-18	70	+/-30	5	Yes
LF353	JFET Lo Noise	13	4	8	15k	4	13	+/-12	+/-6	+/-18	70	+/-30	6.5	Yes
LM13600	Transconductance	4	600	8000	5.4mmho	2@Ao1	50	+/-12	+/-2	+/-18	80	+/-5	typ 2.6	No
	Quad Op Amps													
LM324	GP Amplifier	9	150	500	15k	1	0.5	+/-13	+/-1.5	+/-16	65	32	3	Yes
UA4136	GP Low Noise	7.5	300	800	15k	3	1	+/-12	+/-2	+/-18	70	+/-30	11	Yes
TL074	JFET Lo Noise	13	2	7	15k	3	13	+/-12	+/-3.6	+/-18	70	+/-30	10	Yes
LF347	JFET Lo Noise	13	4	8	15k	4	13	+/-12	+/-4.5	+/-18	70	+/-30	11	Yes
LM614	Inc. Volt Ref.	7	50	250	25k	->1	0.8	12.4	+3	+36	80	36	typ 0.8	Yes
LM3900	Norton Amp	*	*	200	1.2k	2.5	20	10	+4	+32	*	*	10	Yes

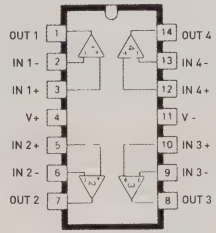
* Not Specified, Note 1: Supply current for all channels in the package, Note 2: Inputs have shunt diode protection, current must be limited, Note 3: Dick Smith Electronics may not stock all devices shown



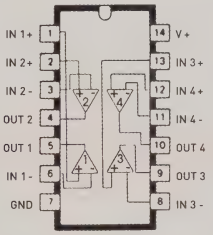
301,308 — 301 only



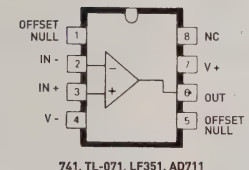
LM627, OP27



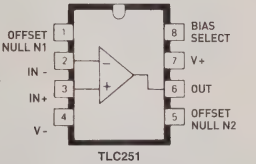
LM324, TL-074, LF347



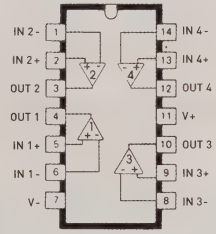
LM 3900



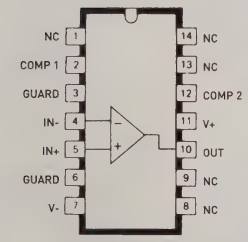
741, TL-071, LF351, AD711



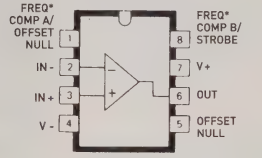
TLC251



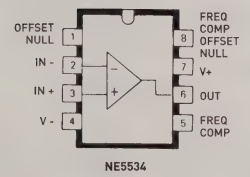
UA4136



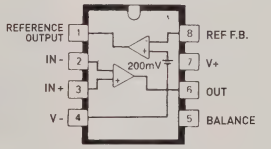
308



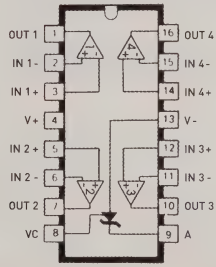
CA-3130, CA-3140
*CA-3130 ONLY



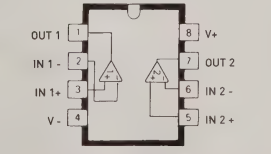
NE5534



LM-10

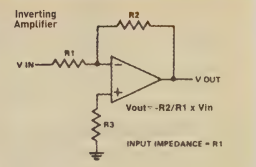


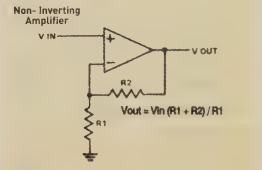
LM 614

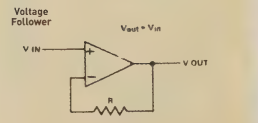


TL-072, LF-353, LM-833, 1458, AD712,LM358

Amplifier Configurations







555 Timer (LM/NE555 Bipolar, TLC555 CMOS)

General

The 555 Timer is a highly versatile low-cost IC specifically designed for precision timing applications. It can also be used in monostable multi-vibrator, astable multi-vibrator and Schmitt trigger applications.

Bipolar 555

The 555 has many attractive features. It can operate from 4.5 Volts to 16 Volt. Its output can source (supply) or sink (absorb) load current up to a maximum of 200mA and so can directly drive loads such as relays, LEDs, low-power lamps, and high impedance speakers. When used in the 'timing' mode, the IC can readily produce accurately timing periods variable from a few microseconds to several hundred seconds via a single R-C network. Timing periods are virtually independent of supply rail voltage, have a temperature coefficient of only .005% per °C, can be started via a TRIGGER command signal, and can be aborted by a RESET command signal.

When used in the monostable mode, the IC produces output pulses with typical rise and fall times of a mere nS.

When used in the astable mode both the frequency and the duty cycle of the waveform can be accurately controlled with two external resistors and one capacitor.

CMOS 555

Due to its high impedance inputs (typically $10^{12}\Omega$), it is capable of producing accurate time delays and oscillations while using less expensive, smaller timing capacitors than NE555. Like the NE555, the TLC555 achieves both monostable (using one resistor and one capacitor) and astable (using two resistors and one capacitor) operation. In addition, 50% duty cycle astable operation is possible using only a single resistor and one capacitor. The TLC555 will operate at frequencies up to 2MHz and is fully compatible with CMOS, TTL, and MOS logic.

While the complementary CMOS output is capable of sinking over 100mA and sourcing over 10mA, the TLC555 exhibits greatly reduced supply current spikes during output transitions. This minimises the need for the large decoupling capacitors required by the NE555.

Specifications

Vcc = 15V unless otherwise stated TA = 25°C		LM/NE555C Limits				TLC555C Limits		
Parameters	Conditions	Min	Typ	Max	Conditions	Min	Typ	Max
Supply Voltage		4.5		16V		2		18
Supply Current	(RL = ∞, Vop = low)		10mA	15mA	(RL=∞, Vop=low)		360uA	
Power Dissipation				600mW			600mW	
Threshold Voltage	(% of Vcc)		67%		(%of Vcc)		67%	
Threshold Current			0.1	0.25uA	(Vcc=5V)		10pA	
Trigger Voltage	(% of Vcc)		33%		(% of Vcc)		33%	
Trigger Current			0.5uA		(Vcc=5V)		10pA	
Reset Voltage		0.4	0.5	1V		0.4	1.1	1.5
Reset Current			0.1	0.4mA	(Vcc=5V)		10pA	
High Level Output	(Iol=100mA)	12.75	13.3V		(Iol=10mA)	12.5V	14.2V	
Low Level Output	(Iol=100mA)		2	2.5V	(Iol=100mA)		1.28V	3.2V
Output Current	Sink			200mA			100mA	
Source			200mA			10mA		
Initial Error of Timing Interval			1%				1%	

Function Table

Reset	Trigger Voltage	Threshold Voltage	Output	Discharge Switch
Low	Irrelevant	Irrelevant	Low	On
High	<1/3 Vcc	Irrelevant	High	Off
High	>1/3 Vcc	>2/3 Vcc	Low	On
High	>1/3 Vcc	<2/3 Vcc	As previously established	

Monostable Operation

In the monostable mode, the timer functions as a one-shot. Referring to circuit the external capacitor is initially held discharged by a transistor inside the timer.

When a negative trigger pulse is applied to lead 2, the flip-flop is set, releasing the short circuit across the external capacitor and drives the output HIGH. The voltage across the capacitor, increases exponentially with the time constant t=R1C1. When the voltage across the capacitor equals 2/3 VCC, the comparator resets the flip-flop which then discharges the capacitor rapidly and drives the output to its LOW state.

The circuit triggers on a negative-going input signal when the level reaches 1/3 VCC. Once triggered, the circuit remains in this state until the set time has elapsed, even if it is triggered again during this interval. The duration of the output HIGH state is given by t=1.1 R1C1. The timing interval is independent of supply. When Reset is not used it should be tied high to avoid any possibility of false triggering.

Astable Operation

When the circuit is connected as shown it triggers itself and free runs as a multivibrator. The external capacitor charges through R1 and R2 and discharges through R2 only. Thus the duty cycle may be precisely set by the ratio of these two resistors.

In the astable mode of operation, C1 charges and discharges between 1/3 VCC and 2/3 VCC. As in the triggered mode, the charge and discharge times and therefore frequency are independent of the supply voltage.

The charge time (output HIGH) is given by: t1 = 0.693 (R1 + R2) C1

and the discharge time (output LOW) by: t2 = 0.693 (R2) C1

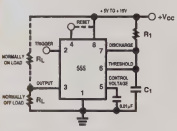
Thus the total period T is given by: T = t1 + t2 = 0.693 (R1 + 2R2) C1

The frequency of oscillation is then:

$$f = \frac{1}{T} = \frac{1.44}{(R1 + 2R2)}$$

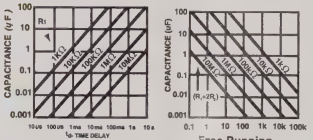
The duty cycle is given by:

$$D = \frac{R2C1}{R1 + 2R2}$$



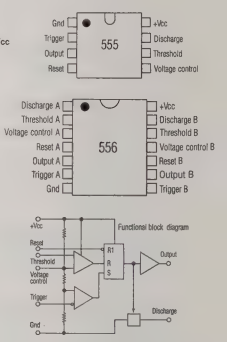
Basic Monostable Circuit

Basic Astable Circuit



Time Delay vs R1 and C1

Free Running Frequency



723 Voltage Regulator

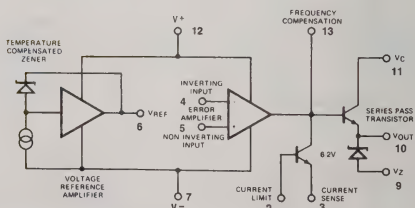
The 723 voltage regulator is a versatile device which is intended for use with positive or negative supplies, as either a series, shunt or switching regulator. It includes a temperature compensated voltage reference, error amplifier, series pass transistor and current limit circuitry.

Output voltage is adjustable between 2 and 37 volts, and the internal transistor can supply up to 150mA. Output current capability can be increased to several amps with an external pass transistor.

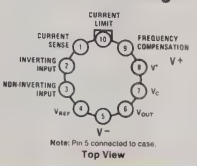
Specifications

Absolute Maximum Rating		
Input Voltage		40V
Diff. Input Voltage (error amp)		+/-5V
Com. Mode Input Voltage (error amp)		8V
Current from ref		15mA
Current from Vz		25mA
Maximum Output Current		150mA
Maximum Dissipation 25°C:	Dip	660mW
	Metal Can	800mW

Absolute Maximum Rating				
Input Voltage Range	9.5	-	40	V
Output Voltage Range	2	-	37	V
Reference Voltage	6.8	7.15	7.5	V
Standby Current Drain	-	2.3	4	mA
Current Limit Sense Voltage	-	0.65	-	V
Thermal Resistance J-A: Dip	-	105	-	°C/W
Metal Can	-	165	-	°C/W



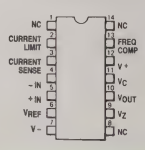
Metal Can Package



Note: Pin 5 connected to case.

Top View

Dip Package



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Voltage Regulators

Three Terminal Voltage Regulators

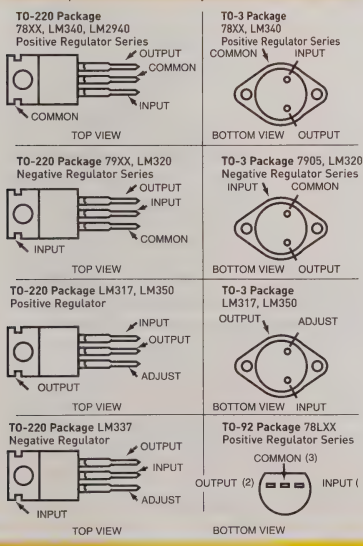
These voltage regulators almost make power supply building unnecessary since they require only a filtered DC voltage input. They are essentially indestructible (if used within manufacturer's specs) because of internal current limiting and thermal shutdown should a short occur. They are ideally suited to local, on-board regulation simplifying power supply distribution systems. Excellent for TTL and project supplies.

With the advent of microprocessors and microcomputers, these regulators have been used extensively in power supplies for such systems.

This type of use typifies their versatility and reliability. Another area of supply regulation use is with analogue operational amplifiers. These circuits usually call for both + and – complementary rail voltages. These three terminal devices ideally suit such requirements.

The addition of protection diodes, as shown in the 317/350 application circuit, is recommended if there is any possibility of the regulator input or output being shorted to ground. These may also be necessary if significant (1uF) capacitance is connected between ground and either the common or output terminals of the regulator.

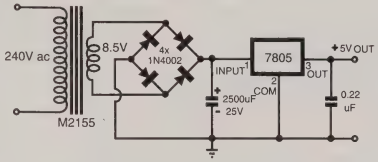
Type	Pol Case	Vin Max	Vin min	Vout typ.	Vout max	Iout (nom) A.	Drop-out Volt.
78L05Z	pos. TO-92	30	4.8	5	5.2	0.1	2.2
78L12Z	pos. TO-92	30	11.5	12	12.5	0.1	2.2
78L15Z	pos. TO-92	35	14.4	15	15.6	0.1	2.2
7805T	pos. TO-220	35	4.8	5	5.2	1	2.5
7808T	pos. TO-220	35	7.7	8	8.3	1	2.5
7812T	pos. TO-220	35	11.5	12	12.5	1	2.5
7815T	pos. TO-220	35	14.4	15	15.6	1	2.5
7805K	pos. TO-3	35	4.8	5	5.2	1	2
7812K	pos. TO-3	35	11.5	12	12.5	1	2
7815K	pos. TO-3	35	14.4	15	15.6	1	2
7905T	neg. TO-220	35	-4.8	-5	-5.2	1	2.3
7912T	neg. TO-220	35	-11.5	-12	-12.5	1	2.3
7915T	neg. TO-220	35	-14.4	-15	-15.6	1	2.3
7905K	neg. TO-3	35	-4.8	-5	-5.2	1	2.3
LM317T	pos. TO-220	40		adj. 1.2 to 37		1.5	3
LM317K	pos. TO-3	40		adj. 1.2 to 37		1.5	3
LM350T	pos. TO-220	35		adj. 1.2 to 33		3	3
LM350K	pos. TO-3	35		adj. 1.2 to 33		3	3
LM337T	neg. TO-220	40		adj. -1.2 to -37		1.5	3
LM-2940CT-5	pos. TO-220	26	<6.25	5	5.25	1	<1
LM-2940T-8	pos. TO-220	26	<9.4	8	8.4	1	<1
LM-2940T-10	pos. TO-220	26	<11.5	10	10.5	1	<1
LM-2940CT-12	pos. TO-220	26	<13.6	12	12.6	1	<1
LM-2941CT	pos. TO-220	45		adj. 5 to 20		1	<1



Typical Power Supply

Output: 5V @ 1A

The same basic circuit can be used with other regulators of different voltages, only the input ac voltage has to be changed to accommodate the requirement of the regulator, e.g. If an output of 12 Volt was the requirement, a 7812 IC could be used with an ac input voltage of 15 Volts.

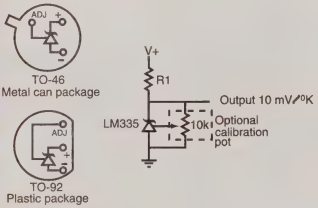


LM335 Precision Temperature Sensor

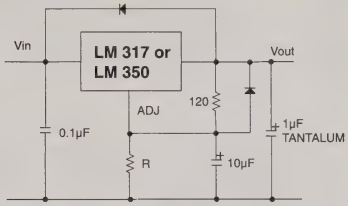
The LM335 operates as a two terminal zener having a breakdown voltage directly proportional to absolute temperature (10mV per degree Kelvin).

An adjustment terminal is provided, and maximum accuracy is realised when this is used to set the output voltage to 2.982 Volts @ 25°C.

Max. Rev. Current	15mA
Continuous operating temp.	-40°C to 100°C
Operating output Voltage (Tc = 25°C, I = 1mA) typ	2.98V
Max. Uncalibrated Temp. error (Tc = 25°C, I = 1mA)	6°C
Output Voltage Tempco.	10mV/°C
Dynamic Impedance	0.6 Ohms
Non-Linearity (I = 1mA)	1.5°C



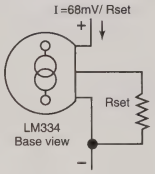
LM317 or LM350 Series



1. Choose Resistor R as follows: R = (96 x Vout) – 120 Where R is in ohms and Vout is in volts.
2. Vin should be at least 2.5 Volts greater than Vout.
3. Capacitor voltage ratings must be chosen appropriately.
4. The protection diodes shown will be necessary if the input or output of the regulator is shorted to ground. 1 Amp types should be adequate.

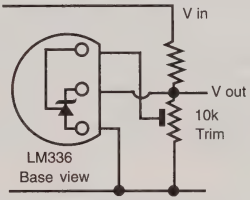
LM334 Adjustable Currrent Source

Operating Voltage
1-30
Max Power Dissipation
200mW
Voltage Sensitivity
0.1%/V
Temperature Sensitivity
+0.33%/°C



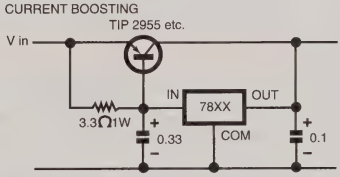
LM336 Reference Diode

	LM336-2.5	LM336-5.0
Max Fwd Current (mA)	10	10
Untrimmed Ref Voltage	2.44-2.54	4.9-5.1
Dynamic Impedance (Ohms)		1 2
Temp Stability (0-70°C)	20ppm	20ppm

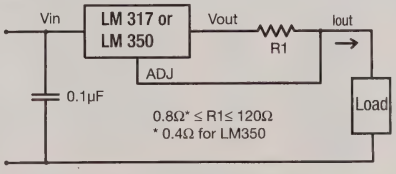


Increasing the output Current of the Regulator

By adding a PNP power transistor to a positive regulator, the output current can be increased above the normal rating of the regulator itself. The circuit shown below can be expected to deliver in excess of 4A with the pass transistor mounted on a heatsink. The same conditions can also be implemented with a negative regulator, the difference being the polarities of components, the pass transistor in this case would be an NPN type such as a 2N3055.

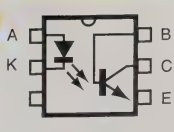


Using the LM317 or LM350 as a Current Regulator

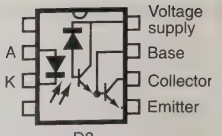


Vref typically 1.25V Iout = Vref/R1

TYPE	Led Vr (V)	Led If (mA)	Led Vf @ V	Transistor If (mA)	Transistor Vce (V)	Transistor Vcb (V)	Transistor Vces @ (V)	Transistor Ic (mA)	Transistor Hfe	Device Ic/If	Device Viso (kV)	Device Ptot (mW)	CASE
H11A1	3	60	1.15	10	30	70	0.1	0.5	500	2.5	7.5	250	D6
4N25	3	80	1.5	10	30	70	0.5	2	325	0.5	2.5	250	D6
4N28	3	80	1.5	10	30	–	0.5	2	325	0.2	0.5	250	D6
SFH601	6	60	1.6	60	70	–	0.4	2.5	–	>0.4	5.3	250	D6
6N138	5	20	1.7	1.6	7	–	0.06	6.4	–	>3	3	135	D8



D6

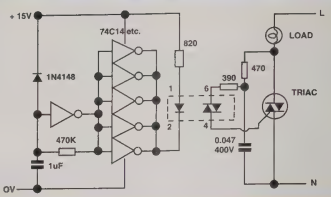


D8

Z4516 3021 Opto-Coupled TRIAC Driver

This opto-coupled triac driver consists of a gallium-arsenide infrared LED optically coupled to a silicon bilateral switch (SBS) in a 6 pin DIL pack. They are designed for general applications requiring isolated triac triggering such as interfacing TTL to mains control equipment. The device features low trigger current, high isolation and blocking voltages, and low cost.

Specifications		Specifications	
Package Dissipation:	330mW	SBS Current (Pk):	100mA
Surge Isolation Voltage:	7500 Volt	SBS On Voltage (max):	3 Volt
SBS Dissipation:	300mW	LED Trigger Current (max):	15mA
SBS Blocking Voltage (Pk):	400 Volt	LED Fsw Voltage (max):	1.5 Volt
SBS dv/dt:	10V/uS (typ.)	LED Current (max):	50mA

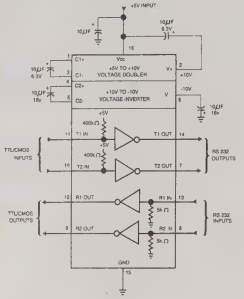


Typical Application – Flashing Light

Z5369 MAX232 CMOS Single-Rail RS-232 Interface

The Z 5369 provides 2 RS-232 inputs and 2 outputs. The device features on-chip dc-dc converters to generate the bipolar RS-232 supplies from a single 5 Volt rail.

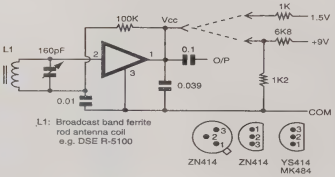
Specifications		
Supply Voltage	Vdd	4.5 to 5.5 Volt
Supply Current	idd	5mA (typ)
Driver Input Voltage	Vil	0.8V (max)
	Vih	2V (min)
Driver Input Current	Iil	-200uA (max)
Driver Output Swing	Voh	5 Volt (min @ R1=3K)
	Vol	-5 Volt (min @ R1=3K)
Driver Output Resistance	Ro	300 Ohms (min)
Output Short Circuit Current	Isc	10mA (typ)
Receiver Input Threshold	Vih	1.7V (typ)
Vil	1.2V (typ)	
Receiver Input Resistance	Rin	3K to 5K
Recommended dc-dc Capacitors		1 to 47 uF



Z6525 MK484 TRF radio ic

This device is a 10-transistor TRF circuit containing an RF amplifier, active detector and AGC housed in a space saving 3 pin package. The circuit features high quality audio, low current consumption, no alignment and complete stability. A typical application is shown with two alternative power source possibilities.

Specifications			
Supply Voltage	1.1 to 1.8V	THD	4%
Supply Current	0.3 to 0.5mA	Power Gain	70dB
Frequency Range	0.15 to 3MHz	Power Gain	70dB
Input Resistance	4M Ohms	AF Output	30mV RMS (Vin=10mV m=30%)

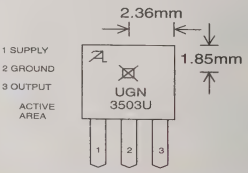


Z2620 ugn3503 Linear Hall Sensor

Linear Hall effect sensors can be used as contactless switches, linear potentiometers, position sensors and current sensors. Unlike optical sensors, the Hall sensors are generally immune to dirt, and unlike inductive coil sensors, these devices can detect both changing and static magnetic fields.

The output voltage of the sensor in the absence of a magnetic field is nominally one half the supply voltage. A south magnetic pole presented to the branded face of the sensor will cause the output voltage to increase. A north magnetic pole will cause the output voltage to decrease.

Specifications			
Operating Voltage	4.5-6V	Bandwidth (-3dB)	23kHz typ.
Supply Current	14 mA max.	Broadband Noise O/P (10Hz-10kHz)	90uV typ.
Quiescent O/P Voltage (B=0)	2.5V typ.	Output Impedance	50 Ohms typ.
Sensitivity	13V/Tesla.	Operating temperature Range	-20°C to +85°C



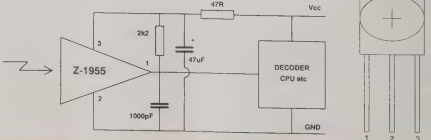
Z1955 Infra Red Receiver Device

The Z1955 device is comprised of an IR receiver diode, amplifier, limiter, bandpass filter, demodulator and comparator, all in the one 3 terminal package. It provides a compact and inexpensive alternative to traditional discrete IR receiver front ends.

The output of the device is normally HIGH, and goes LOW in the presence of infrared light amplitude modulated by a 38kHz sub-carrier.

The output is electronically equivalent to a common-emitter transisitor with a 22k pull-up resistor. This output can drive a CMOS input directly, and an external 2k2 pull-up resistor can be added for driving TTL.

Specifications	Min.	Typ.	Max.
Operating Voltage	4.7V	5.0V	5.3V
Quiescent current (Iout=0mA)	2.8mA	4.5mA	
Output Voltage High (Isource=0mA)	4.8V		
Output Voltage Low (Isink=2mA)	0.45V	0.6V	
Sub-carrier Filter Centre	38kHz		
Reception Distance on-axis	5m		
Reception Distance +/-30° horiz.	3m		
Reception Distance +/-15° vert.	3m		



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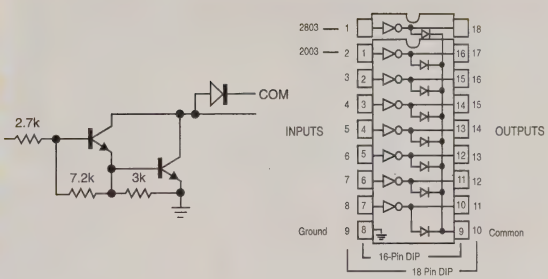
These devices comprise either seven or eight Darlington connected transistors in a common emitter, open collector arrangement. Each Darlington pair is provided with a clamping diode, and series input resistor to allow operation directly from TTL/CMOS operating at 5 volts. Typical applications include display, solenoid and relay drivers.

Specifications

Device	Z5380 (2003)	Z6282 (2803)
Number of drivers in package	7	8
Number of pins	16	18
Collector Emitter Voltage (max)	50V	50V
Collector Current (max)	350mA	500mA
Vce (sat) (Ic = 350mA, Ib = 0.5mA)	1.6V	1.6V
Input Voltage (Vce = 2V, Ic = 350mA)	3.0V	3.0V
Clamp Diode Vf (If = 350mA)	2.0V	2.0V
Max. Power Dissipation (25°C)	1.8W	1.8W
Representative Devices	ULN2003 DS2003 uA9667	ULN2803



Using Power MOSFETs

MOSFETs have undergone considerable development in the last decade and offer several advantages over common bipolar transistors, particularly in switching applications.

The most common power MOSFETs are N-channel enhancement mode devices. These are not unlike NPN bipolar transistors in that the Source is usually the most negative terminal and the Drain is the most positive. No current flows through the Drain-Source channel when there is zero volts between the Gate and Source but the channel conducts when a high enough positive voltage, typically 2 to 4 Volts, is applied between the Gate and the Source. At higher Gate to Source voltages of around 10 Volts the Drain-Source channel is fully conducting and is equivalent to a very low value resistor – typically 0.1 Ohms.

Although MOSFETs are fairly rugged, the Gate is very susceptible to electrostatic damage and normal antistatic techniques should be used when handling and installing MOSFETs.

In the circuits below, figure 1 shows a car interior light extender. When one of the car doors is opened, its door switch closes and draws base current through Q1. Q1 conducts, charging C1 and provides sufficient gate voltage for Q2 to switch on.

When the door switch opens, Q1 is turned off and C1 discharges via the 1M resistor. After about 10 seconds the voltage on C1 falls below the FET's Gate threshold voltage and Q2 switches off. As the MOSFET switches off slowly, it dissipates several watts of heat for a short period but should not need a heatsink for normal, infrequent switching.

A novel reverse-polarity protection circuit is shown in figure 2. If the supply is connected correctly, the FET's inherent Drain-Source diode conducts, allowing almost the full supply voltage to appear across the load. The gate is now biased on, causing the Drain-Source channel to fully conduct and short-circuit the diode. If the supply is reversed the diode will not conduct and the FET, having no Gate bias, will block current flow. The major advantage of this circuit over a simple series diode is the much lower voltage drop lost across the FET.

Figure 3 shows a high efficiency dimmer for 12 Volt filament lamps. The 555 timer IC is configured as a variable duty cycle, astable oscillator running at around 300Hz. No heatsink should be necessary for loads of up to 40W and only a small heatsink (30° C/W) is needed for 60W loads.

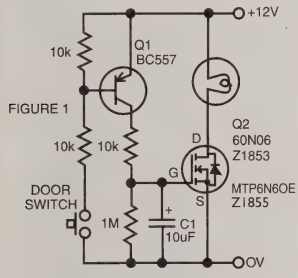


FIGURE 1

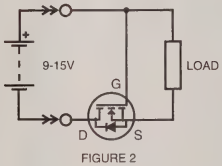
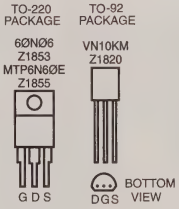


FIGURE 2



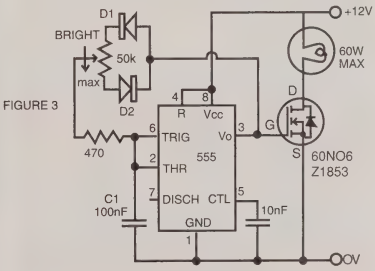


FIGURE 3

P7810 Keypad

P7810 Numeric Matrix Keypad

The P7810 is a 12-button keypad, made up in the standard three-column four-row XY matrix, and featuring square white buttons with black lettering. The buttons operate SPST switches of conductive rubber pads and include a click effect for tactile feedback.

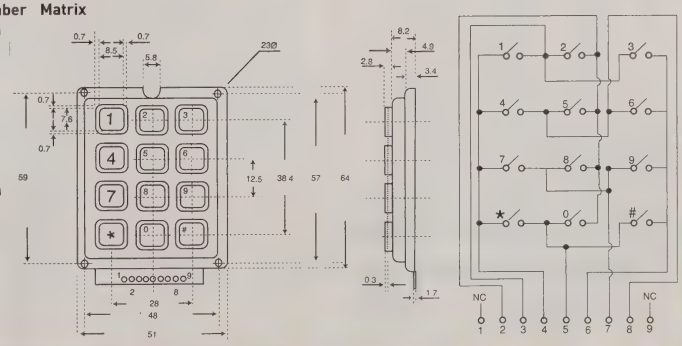
The interface is a simple row/column connection across seven pins. Ideal for use with microprocessors, as alarm key-code entry panels and for general hobbyist keypad applications.

Specifications

Contact rating:	20mA, 24VDC maximum
Contact resistance:	200 ohms maximum
Actuating force:	100 +/-30 grams
Stroke:	1.5 +/-0.5mm
Contact bounce:	5ms maximum
Contact life:	1 million cycles per key

Output Pin Arrangement

Output Pin Number	Matrix
1	No connection
2	Column 2
3	Row 1
4	Column 1
5	Row 4
6	Column 3
7	Row 3
8	Row 2
9	No connection



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Hexadecimal Constants

Hex Code	Most Significant Bytes IV	III	Least Significant Bytes II	I
0	0	0	0	0
1	4096	256	16	1
2	8192	512	32	2
3	12288	768	48	3
4	16384	1024	64	4
5	20480	1280	80	5
6	24576	1536	96	6
7	28672	1792	112	7
8	32768	2048	128	8
9	36864	2304	144	9
A	40960	2560	160	10
B	45056	2816	176	11
C	49152	3072	192	12
D	53248	3328	208	13
E	57344	3584	224	14
F	61440	3840	240	15

Hex-To-Decimal Conversion

Decimal Value = IV + III + II + I

The RS-232C Interface

The Basic rs-232c Electrical Specification

Communication rate

0-20,000 bits per second

Driver output voltage levels maximum no load

-25 Volt logic 1, +25 Volt logic 0

Driver output voltage ranges for loads between 3k and 7k Ohms

logic 1: -15 Volt (7k) and -5 Volt (3k)

logic 0: +15 Volt (7k) and +5 Volt (3k)

Driver output current, short circuit

500mA maximum

Driver output impedance with power off

300 Ohms minimum

Maximum driver output slew rate

30 Volt per microsecond

Receiver input resistance

7k Ohms maximum

3k Ohms minimum

Effective receiver input capacitance

2500pF maximum

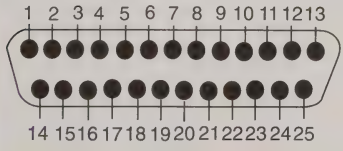
Maximum receiver input voltage range

-25V to +25V

The following table shows the nine most common signals used for serial communications and their pin allocations for nine and 25 pin connectors.

	Signal Name	PIN No. (9 pin)	PIN No. (25 pin)
TD	Transmitted Data	3	2
RD	Received Data	2	3
RTS	Request to Send	7	4
CTS	Clear to Send	8	5
DSR	Data Set Ready	6	6
SG	Signal Ground	5	7
CD	Carrier Detect	1	8
DTR	Data Terminal Ready	4	20
RI	Ring Indicator	9	22

DB25 Serial Male Plug (front view)



ASCII Character Codes as defined in ANSI X3.4

Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char
0	0	NUL	32	20	SPACE	64	40	@	96	60	`
1	1	SOH	33	21	!	65	41	A	97	61	a
2	2	STX	34	22	"	66	42	B	98	62	b
3	3	ETX	35	23	#	67	43	C	99	63	c
4	4	EOT	36	24	$	68	44	D	100	64	d
5	5	ENQ	37	25	%	69	45	E	101	65	e
6	6	ACK	38	26	&	70	46	F	102	66	f
7	7	BEL	39	27	'	71	47	G	103	67	g
8	8	BS	40	28	(	72	48	H	104	68	h
9	9	HT	41	29	)	73	49	I	105	69	i
10	A	LF	42	2A	*	74	4A	J	106	6A	j
11	B	VT	43	2B	+	75	4B	K	107	6B	k
12	C	FF	44	2C	,	76	4C	L	108	6C	l
13	D	CR	45	2D	-	77	4D	M	109	6D	m
14	E	SO	46	2E	.	78	4E	N	110	6E	n
15	F	SI	47	2F	/	79	4F	O	111	6F	o
16	10	DLE	48	30	0	80	50	P	112	70	p
17	11	DC1	49	31	1	81	51	Q	113	71	q
18	12	DC2	50	32	2	82	52	R	114	72	r
19	13	DC3	51	33	3	83	53	S	115	73	s
20	14	DC4	52	34	4	84	54	T	116	74	t
21	15	NAK	53	35	5	85	55	U	117	75	u
22	16	SYN	54	36	6	86	56	V	118	76	v
23	17	ETB	55	37	7	87	57	W	119	77	w
24	18	CAN	56	38	8	88	58	X	120	78	x
25	19	EM	57	39	9	89	59	Y	121	79	y
26	1A	SUB	58	3A	:	90	5A	Z	122	7A	z
27	1B	ESC	59	3B	;	91	5B	[	124	7C	|
28	1C	FS	60	3C	<	92	5C	\	125	7D	}
29	1D	GS	61	3D	=	93	5D	]	126	7E	~
30	1E	RS	62	3E	>	94	5E	^	127	7F	DEL
31	1F	US	63	3F	?	95	5F	-			

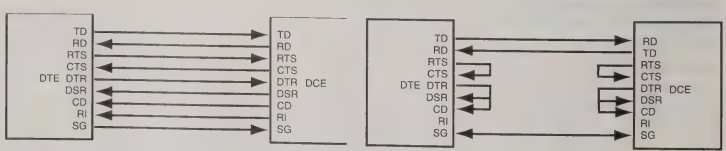
ASCII Control Codes

NUL	(Ctrl @)	Null	DLE	(Ctrl P)	Data Link Escape
SOH	(Ctrl A)	Start of Heading	DC1	(Ctrl Q)	Device Control 1
STX	(Ctrl B)	Start of Text	DC2	(Ctrl R)	Device Control 2
ETX	(Ctrl C)	End of Text	DC3	(Ctrl S)	Device Control 3
EOT	(Ctrl D)	End of Transmission	DC4	(Ctrl T)	Device Control 4
ENQ	(Ctrl E)	Enquiry	NAK	(Ctrl U)	Negative Acknowledge
ACK	(Ctrl F)	Acknowledge	SYN	(Ctrl V)	Synchronous Idle
BEL	(Ctrl G)	Bell	ETB	(Ctrl W)	End of Transmission Block
BS	(Ctrl H)	Backspace	CAN	(Ctrl X)	Cancel
HT	(Ctrl I)	Horizontal Tab	EM	(Ctrl Y)	End of Medium
LF	(Ctrl J)	Line Feed	SUB	(Ctrl Z)	Substitute
VT	(Ctrl K)	Vertical Tab	ESC	(Ctrl [)	Escape
FF	(Ctrl L)	Form Feed	FS	(Ctrl \)	File Separator
CR	(Ctrl M)	Carriage Return	GS	(Ctrl])	Group Separator
SO	(Ctrl N)	Shift Out	RS	(Ctrl ^)	Record Separator
SI	(Ctrl O)	Shift In	US	(Ctrl _)	Unit Separator

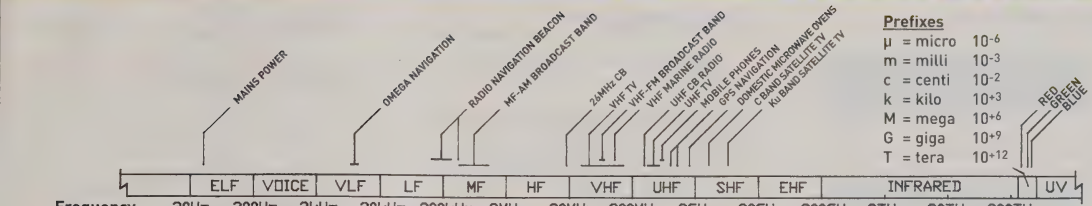
Common RS-232C Connections

Each signal (except ground) is either an input or an output depending whether it is on the Data Terminal Equipment 'DTE' e.g. a computer terminal) or the Data Circuit Terminating Equipment 'DCE' (e.g. a modem). A typical connection is shown here.

When two computer terminals (DTEs) are connected together a 'null modem' hook-up is needed to fool each DTE into thinking that it is connected to DCE. A typical null modem connection is shown here.



DICK SMITH ELECTRONICS That's where you go!
www.dse.co.nz



Prefixes

μ	= micro	10^{-6}
m	= milli	10^{-3}
c	= centi	10^{-2}
k	= kilo	10^{+3}
M	= mega	10^{+6}
G	= giga	10^{+9}
T	= tera	10^{+12}

New Zealand FM-AM Broadcast Standards

Frequency Range	526.5-1605.5kHz
Channel Frequencies	531, 540, 549 ... 1593, 1602 (Note: Some special services are located slightly above this band. Receivers may need modification).
Stereo Signal	Compatible quadrature amplitude modulation (C-Quam) 25Hz +/-0.1 Hz with a dev. of 3% to 5% of the quadrature chl
Frequency Response	within 2dB (50Hz – 7.5kHz)
THD	Not exceeding 4% at 80% modulation (400Hz – 5kHz)
Stereo Separation	18dB min.

New Zealand VHF-FM Broadcast Standards

Frequency Range	88-108MHz
Channel Frequencies	88.1, 88.3... 107.7, 107.9
Deviation	75kHz
Pre-emphasis/ De-emphasis	50 microseconds
Stereo Channel Subcarrier Frequency	38kHz
Pilot Frequency	19kHz

Colour TV Broadcast Standards

Channel Width	7 MHz vestigial sideband trans.
Vision Carrier	1.25MHz above lower frequency edge of channel
Primary Sound Carrier	5.5MHz above vision carrier
Nicam Sound Carrier	728K Bit/sec 5.85MHz above vision carrier
Vision Modulation	Negative amplitude modulation
Lines per Picture	625 lines, interlaced 2:1
Line Frequency	15625Hz
Field Frequency	50Hz
Colour Subcarrier Frequency	4.43361875 MHz
Aspect Ratio	4:3
Horizontal Sync Pulse Amplitude	95% carrier amplitude
Front Porch	1.3 – 1.8us
Back Porch	Line blanking interval - (front porch + sync pulse)
Line Blanking Interval	11.8 - 12.3us
Black and Blanking Level	76% peak carrier level
White Level	20% peak carrier level
Pre-equalisation Pulse Interval	2.5H (H=line period, 64 us)
Post-equalisation Pulse Interval	2.5H
Field Sync Pulse Interval	2.5H
Field Blanking Interval	2.5 +12us
Ratio peak vision to peak sound carrier	Single sound carrier systems: 10dB
Sound Modulation	FM
Sound Deviation	+/-50kHz
Audio Pre-emphasis	50us

Timing, Test & Data Signals present in Vertical Sync Pulse

Line	Use
625 – 2.5	Serrated Vertical Sync Pulse
2.5 – 5	Equalising Pulses
6	Blank for Noise Test
7 – 8	Teletext Data
9 – 10	Datacast
11 – 15	Teletext Data
16	Data Signals/Time Code
17 – 18	Teletext Data
19	Composite Test Signal
20	Pal Multiburst Test Signal
21	Teletext Subtitles
22	Blank for Noise Test
23 – 309	Viewable Picture Lines, Field 1
310 - 312.5	Equalising Pulses
312 – 331	Same as Lines 1 – 18
332	Colour Bar Test Signal
333	Modulated Pedestal Signal
334	Teletext Subtitles
335	Blank for Noise Test
336 – 622	Viewable Picture Lines, Field 2
623 – 624	Equalising Pulses

VHF Marine Frequencies

Ch	Freq. Ship (MHz)	Shore (MHz)	Ch	Freq. Ship (MHz)	Shore (MHz)
1	156.050	160.650	60	156.025	160.625
2	156.100	160.700	61	156.075	160.675
3	156.150	160.750	62	156.125	160.725
4	156.200	160.800	63	156.175	160.775
5	156.250	160.850	64	156.225	160.825
6	156.300	156.300	65	156.275	160.875
7	156.350	160.950	66	156.325	160.925
8	156.400	156.400	67	156.375	156.375
9	156.450	156.450	68	156.425	156.425
10	156.500	156.500	69	156.475	156.475
11	156.550	156.550	70	156.525	156.525
12	156.600	156.600	71	156.575	156.575
13	156.650	156.650	72	156.625	156.625
14	156.700	156.700	73	156.675	156.675
15	156.750	156.750	74	156.725	156.725
16	156.800	156.800	77	156.875	156.875
17	156.850	156.850	78	156.925	161.525
18	156.900	161.500	79	156.975	161.575
19	156.950	161.550	80	157.025	161.625
20	157.000	161.600	81	157.075	161.675
21	157.050	161.650	82	157.125	161.725
22	157.100	161.700	83	157.175	161.775
23	157.150	161.750	84	157.225	161.825
24	157.200	161.800	85	157.275	161.875
25	157.250	161.850	86	157.325	161.925
26	157.300	161.900	87	157.375	161.975
27	157.350	161.950	87A	157.375	157.375
28	157.500	162.000	88	157.425	162.025

Ch	Use
6	SAR, Port Operations, Commercial
8	Port Operations, Commercial
9-14	Port Operations
16	Distress and Safety
20	Port Operations
23-28	Public Correspondence (Seaphone)
67	Distress and Safety
68	Port Operations
71	Professional Fishing
72	Yachts, Commercial, Professional Fishing, Port Operations
73	Non-Commercial, Yachts, etc.
74	Commercial
77	Yachts, Professional Fishing
78	Commercial
79	Port Operations
87	Public Correspondence (Seaphone)
87A	Withdrawn 31-3-92

UHF TV Channels

Channels 27 – 62 are UHF Band (Band IV and V-518 to 806 MHz).

Transmissions conform to 625 line CCIR System G on UHF and The vision carrier frequency is nominally 1.25 MHz above the vision carrier frequency; the centre frequency of the NICAM digital sound carrier (if transmitted) is 5.850 MHz above the vision carrier frequency. The B/G variant of 728 NICAM is used which has a total occupied band width of 510 kHz.

Channel Number UHF	Frequency Limits (MHz)	Vision Carrier (MHz)	FM Sound Carrier (MHz)	NICAM Sound Carrier (MHz)
27	518 to 526	519.25	524.75	525.10
28	526 to 534	527.25	532.75	533.10
29	534 to 542	535.25	540.75	541.10
30	542 to 550	543.25	548.75	549.10
31	550 to 558	551.25	556.75	557.10
32	558 to 566	559.25	564.75	565.10
33	566 to 574	567.25	572.75	573.10
34	574 to 582	575.25	580.75	581.10
35	582 to 590	583.25	588.75	589.10
36	590 to 598	591.25	596.75	597.10
37	598 to 606	599.25	604.75	605.10
38	606 to 614	607.25	612.75	613.10
39	614 to 622	615.25	620.75	621.10
40	622 to 630	623.25	628.75	629.10
41	630 to 638	631.25	636.75	637.10
42	638 to 646	639.25	644.75	645.10
43	646 to 654	647.25	652.75	653.10
44	654 to 662	655.25	660.75	661.10
45	662 to 670	663.25	668.75	669.10
46	670 to 678	671.25	676.75	677.10
47	678 to 686	679.25	674.75	685.10
48	686 to 694	687.25	692.75	693.10
49	694 to 702	695.25	700.75	701.10
50	702 to 710	703.25	708.75	709.10
51	710 to 718	711.25	716.75	717.10
52	718 to 726	719.25	724.75	725.10
53	726 to 734	727.25	732.75	733.10
54	734 to 742	735.25	740.75	741.10
55	742 to 750	743.25	748.75	749.10
56	750 to 758	751.25	756.75	757.10
57	758 to 766	759.25	764.75	765.10
58	766 to 774	767.25	772.75	773.10
59	774 to 782	775.25	780.75	781.10
60	782 to 790	783.25	788.75	789.10
61	790 to 798	781.25	796.75	797.10
62	798 to 806	799.25	804.75	805.10

New Zealand VHF TV Channels

Ch	Vision (MHz)	Sound (MHz)	Ch	Vision (MHz)	Sound (MHz)
1	45.25	50.75	7	196.25	201.75
2	55.25	60.75	8	203.25	208.75
3	62.25	67.75	9	210.25	215.75
4	175.25	180.75	10	217.25	222.75
5	182.25	187.75	11	224.25	229.75
6	189.25	194.75			

Australian & New Zealand CB Radio Channels

Ch No.	Aust. H.F. (MHz)	NZ UHF (MHz)	NZ H.F. (MHz)
1	26.965	476.425	26.330
2	26.975	476.450	26.340
3	26.985	476.475	26.350
4	27.005	476.500	26.370
5	27.015	476.525	26.380
6	27.025	476.550	26.390
7	27.035	476.575	26.400
8	27.055	476.600	26.420
9	27.065	476.625	26.430
10	27.075	476.650	26.440
11	27.085	476.675	26.450
12	27.105	476.700	26.470
13	27.115	476.725	26.480
14	27.125	476.750	26.490
15	27.135	476.775	26.500
16	27.155	476.800	26.520
17	27.165	476.825	26.530
18	27.175	476.850	26.540
19	27.185	476.875	26.550
20	27.205	476.900	26.570
21	27.215	476.925	26.580
22	27.225	476.950	26.590
23	27.255	476.975	26.620
24	27.235	477.000	26.600
25	27.245	477.025	26.610
26	27.265	477.050	26.630
27	27.275	477.075	26.640
28	27.285	477.100	26.650
29	27.295	477.125	26.660
30	27.305	477.150	26.670
31	27.315	477.175	26.680
32	27.325	477.200	26.690
33	27.335	477.225	26.700
34	27.345	477.250	26.710
35	27.355	477.275	26.720
36	27.365	477.300	26.730
37	27.375	477.325	26.740
38	27.385	477.350	26.750
39	27.395	477.375	26.760
40	27.405	477.400	26.770

Calling Channels		Emergency Channels
Aust HF (AM) Ch.11		Aust HF (AM) Ch.9
Aust HF (SSB) Ch.6		Aust UHF Ch.5/35
Aust UHF	Ch.11	NZ HF Ch.15
NZ HF	Ch.15	

30 PIN SIMM Memory

SIMM = Single Inline Memory Module

72 PIN SIMM Memory

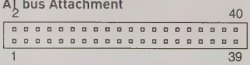
SIMM = Single Inline Memory Module

168 PIN DIMM Memory

DIMM = Dual Inline Memory Module

PC – IDE/ATA BUS

IDE = Integrated Drive Electronics
ATA = AT bus Attachment



PIN IDC MALE at the controller & peripherals

Pin	IDE	Pin	IDE	Pin	ATA	Pin	ATA
1	/RESET	21	n/c	1	/RESET	21	DMARQ
2	GND	22	GND	2	GND	22	GND
3	DD7	23	/IOW	3	DD7	23	/IOW
4	DD8	24	GND	4	DD8	24	GND
5	DD6	25	/IOR	5	DD6	25	/IOR
6	DD9	26	GND	6	DD9	26	GND
7	DD5	27	IO-CH-RDY	7	DD5	27	IO-CH-RDY
8	DD10	28	ALE	8	DD10	28	SPSYNC:CSEL
9	DD4	29	n/c	9	DD4	29	/DMACK
10	DD11	30	GND	10	DD11	30	GND
11	DD3	31	IRQR	11	DD3	31	INTRQ
12	DD12	32	/IOCS16	12	DD12	32	/IOCS16
13	DD2	33	DA1	13	DD2	33	DA1
14	DD13	34	n/c	14	DD13	34	PDIAG
15	DD1	35	DA0	15	DD1	35	DA0
16	DD14	36	DA2	16	DD14	36	DA2
17	DD0	37	/IDE-CS0	17	DD0	37	/IDE-CS0
18	DD15	38	/IDE-CS1	18	DD15	37	/IDE-CS1
19	GND	39	/ACTIVE	19	GND	39	/ACTIVE
20	KEY	40	GND	20	KEY	40	GND

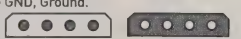
PC Floppy Drive IDC

34 PIN IDC MALE at the computer & disk-drives. Can be an Edge-connector on old PCs.

Pin	Name	Description
2	/REDWC	Density Select
4	n/c	Reserved
6	n/c	Reserved
8	/INDEX	Index
10	/MOTEA	Motor Enable A
12	/DRVSB	Drive Sel B
14	/DRVSA	Drive Sel A
16	/MOTEB	Motor Enable B
18	/DIR	Direction
20	/STEP	Step
22	/WDATE	Write Data
24	/WGATE	Floppy Write Enable
26	/TRK00	Track 0
28	/WPT	Write Protect
30	/RDATA	Read Data
32	/SIDE1	Head Select
34	/DSKCHG	Disk Change

All odd pins are GND, Ground.

PC 5.25" Power

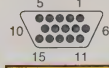


At the peripheral — At the power supply

Pin	Name	Color	Description
1	+12V	Yellow	+12 VDC
2	GND	Black	+12 V Ground
3	GND	Black	+5 V Ground
4	+5V	Red	+5 VDC

PC VGA Video (15 PIN)

VGA = Video Graphics Adapter or Video Graphics Array



15 PIN HIGH DENSITY D-SUB FEMALE at the videocard

Pin	Name	Description
1	RED	Red Video (75 ohm, 0.7 V p-p)
2	GREEN	Green Video (75 ohm, 0.7 V p-p)
3	BLUE	Blue Video (75 ohm, 0.7 V p-p)
4	ID2	Monitor ID Bit 2
5	GND	Ground
6	RGND	Red Ground
7	GGND	Green Ground
8	BGND	Blue Ground
9	KEY	Key (No pin)
10	SGND	Sync Ground
11	ID0	Monitor ID Bit 0
12	ID1 or SDA	Monitor ID Bit 1
13	HSYNC or CSYNC	Horizontal Sync (or Composite Sync)
14	VSYNC	Vertical Sync
15	ID3 or SCL	Monitor ID Bit 3

PC VGA Video (9 PIN)

VGA = Video Graphics Adapter or Video Graphics Array

9 PIN D-SUB FEMALE at the videocard

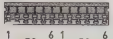
Pin	Name	Description
1	RED	Red Video
2	GREEN	Green Video
3	BLUE	Blue Video
4	HSYNC	Horizontal Sync
5	VSYNC	VerticalSync
6	RGND	Red Ground
7	GGND	Green Ground
8	BGND	Blue Ground
9	SGND	Sync Ground

VGA Cable (9 PIN TO 15 PIN)

9 PIN D-SUB MALE to the computer

Signal	9-Pin	15-Pin
Red Video	1	1
Green Video	2	2
Blue Video	3	3
Horizontal Sync	4	13
Vertical Sync	5	14
Red GND	6	6
Green GND	7	7
Blue GND	8	8
Sync GND	9	10 + 11

PC AT Power

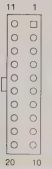


MOLEX 15-48-0106 at the Computer 90331-00 at the PSU

At the power supply — At the peripheral

Pin	Name	Color	Description
1	PG	Orange	Power Good, +5 VDC when all voltages have stabilised
2	+5V	Red	+5 VDC (or n/c)
3	+12V	Yellow	+12 VDC
4	-12V	Blue	-12 VDC
5	GND	Black	Ground
6	GND	Black	Ground
			P9
1	GND	Black	Ground
2	GND	Black	Ground
3	-5V	White or Yellow	-5 VDC
4	+5V	Red	+5 VDC
5	+5V	Red	+5 VDC

PC ATX Power



Signal	Pin #	Pin #	Signal
3.3V	11	1	3.3V
-12V	12	2	3.3V
Ground	13	3	Ground
PS-ON	14	4	+5V
Ground	15	5	Ground
Ground	16	6	+5V
Ground	17	7	Ground
-5V	18	8	Power good
+5V	19	9	5VSB
+5V	20	10	+12V

PC Keyboard (PS/2)

6 PIN MINI-DIN FEMALE (PS/2 STYLE) at the computer

Pin	Name	Description
1	Data	Key Data
2	n/c	Not connected
3	GND	Ground
4	VCC	Power, +5 VDC
5	CLK	Clock
6	n/c	Not connected

PC Keyboard (AT)

5 PIN DIN 180° (DIN41524) FEMALE at the computer

Pin	Name	Description	Technical
1	CLOCK	Clock	CLK/CTS, Open-Collector
2	DATA	Data	RxD/TxD/RTS, Open-Collector
3	n/c	Not connected	Reset on some very old keyboards
4	GND	Ground	
5	VCC	+5 VDC	

PC PS/2 Mouse Port

6 PIN MINI-DIN FEMALE (PS/2 STYLE) at the computer

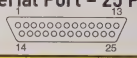
Pin	Name	Description
1	Data	Mouse Data
2	n/c	Not connected
3	GND	Ground
4	VCC	Power, +5 VDC
5	CLK	Clock
6	n/c	Not connected

PC Serial Port – 9 PIN

9 PIN D-SUB MALE at the computer

Pin	Name	Description
1	CD	Carrier Detect
2	RXD	Receive Data
3	TXD	Transmit Data
4	DTR	Data Terminal Ready
5	GND	System Ground
6	DSR	Data Set Ready
7	RTS	Request to Send
8	CTS	Clear to Send

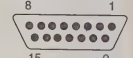
PC Serial Port – 25 PIN



25 PIN D-SUB MALE at the computer

Pin	Name	Description
1	SHIELD	Shield Ground
2	TXD	Transmit Data
3	RXD	Receive Data
4	RTS	Request to Send
5	CTS	Clear to Send
6	DSR	Data Set Ready
7	GND	System Ground
8	CD	Carrier Detect
9-19	n/c	No Connection
20	DTR	Data Terminal Ready
21	n/c	No Connection
22	RI	Ring Indicator
23-25	n/c	No Connection

PC Joystick Game Port



15 PIN D-SUB FEMALE at the computer

Pin	Name	Description
1	+5V	+5 VDC
2	/B1	Button 1
3	X1	Joystick 1-X
4	GND	Ground
5	GND	Ground
6	Y1	Joystick 1-X
7	/B2	Button 2
8	+5V	+5 VDC
9	+5V	+5 VDC
10	/B4	Button 4
11	X2	Joystick 2-X
12	MIDITXD	MIDI Transmit
13	Y2	Joystick 2-Y
14	/B3	Button 3
15	MIDIRXD	MIDI Receive

What is a Computer Network?

A computer network is where 2 or more computers or computer peripherals (e.g. Printers, Gaming Consoles) are connected together for the purpose of exchanging data.

Computer Networks allow you to:

- **Share files**
- **Share printers**
- **Share an Internet connection**
- **Collaborate / Communicate with others**
- **Play Network Games**

Types of Computer Networks

WIRED (ETHERNET) NETWORKS

10Base2

An older networking scheme operating at 10Mbps, it uses Coaxial Cable (RG-58) in a bus topology and can run a maximum of 185m. No other networking device such as a HUB/Switch/Router is required in a basic environment.

10/100/1000BaseT

The most widely used networking scheme with speeds of 10/100/1000Mbps, it uses twisted-pair (UTP) cable in a star topology and allows multiple segments of up to 100m. A HUB/Switch/Router is required if connecting more than 2 devices. When connecting only 2 devices, a special wiring convention is used – this type of cable is referred to as a Crossover Cable.

HomePlug

And alternative to installing new cable, HomePlug networking allows you to use the power cables of your home to connect devices. A HUB/Switch/Router is required if connecting more than 2 devices and each device will also require a special UTP-to-HomePlug adaptor.

WIRELESS NETWORKS

Infrared (IrDA)

Infrared devices (XH8286) can be used to setup small, low-speed, line-of-sight wireless networks. They are more commonly used to transfer data and digital images between mobile devices (e.g. PDAs, Mobile phones, etc.) and a PC/Notebook. IrDA devices usually only allow two devices to be connected simultaneously – a limitation imposed by the line-of-sight aspect of infrared communication.

Bluetooth (Personal Area Networks)

Also a short-range, low-speed (723.1 Kbps) wireless networking technology, it is again primarily used for connecting mobile devices, but also for creating small ad-hoc networks – i.e. to share an Internet connection. Bluetooth generally allows seven devices to connect to a Bluetooth network (Piconet) – from up to 100m away.

802.11b/g (Wi-Fi)

A medium-range networking scheme that is comparable to wired (Ethernet) networks. Available in three main varieties: 802.11a (54Mbps), 802.11b (11Mbps) and 802.11g (54Mbps), Wi-Fi networks are fast becoming increasingly popular in both the home and office.

A special (wireless) AccessPoint/Router is usually required and each network device (node) needs a wireless network card (or adaptor). 802.11b/g networks operate in the license-free 2.4GHz spectrum - allowing older, slower 802.11b networks to co-exist and share data with newer 802.11g networks.

The typical (indoor) operating range of 802.11b/g networks is about 100m between nodes, although this can easily be extended by adding external antennas, signal boosters or additional AccessPoints.

Connecting Two Computers

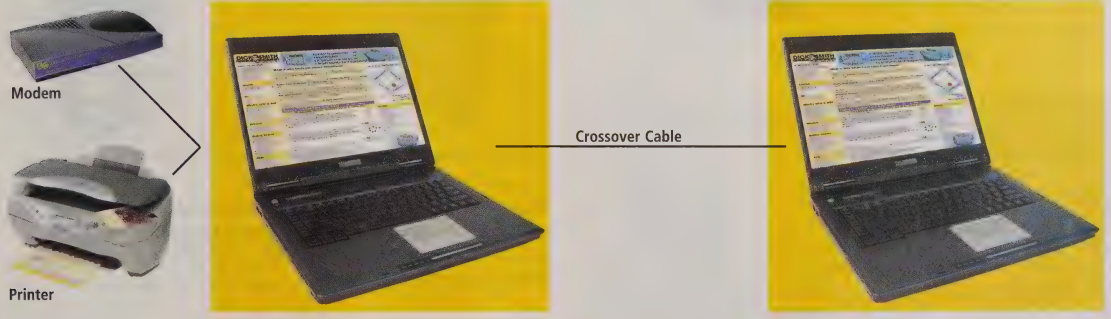
It is possible to connect two computers together without using a switch. This requires a special "Crossover" cable or two patch leads with a crossover adaptor.

Each PC will also need a Network Interface Card (NIC).

With this setup, both PC's can play network games, share the printer, share documents and files, access the internet via the modem.

Network Interface Card
XH7976 PCI Card 10/100Mbps SNMP
XH7975 PCI Card 10/100Mbps WOL

Crossover Cables	
XH3295	1m – CAT 6
XH3296	3m – CAT 6
XH3297	5m – CAT 6
XH3298	10m – CAT 6
XH3353	20m – CAT 6
XH3354	30m – CAT 6



About Hubs & Switches

A **HUB** connects multiple network devices (nodes) together. In basic terms, a HUB repeats network traffic to all connected computers, thus sharing the bandwidth. This allows only one node to transmit at a time and as more nodes are connected, more collisions are observed and the network gets slower.

XH8259
(10/100Mbps 8-port Switch)

XH8263
(10/100/1000Mbps 5-port)

A **Switch** also connects multiple nodes together, but acts more like a telephone exchange as it knows the address of each attached node and directs traffic accordingly. Each node therefore gets the full available bandwidth, allowing greater speeds. When using a switch, the speed of the network is not affected when new nodes are added. This makes adding new devices, as well as troubleshooting, much simpler.

About Routers

Routers are similar to network switches (as mentioned earlier), but allow you to connect to other networks. Routers setup and maintain a routing-table, containing addresses and routes to other networks, they then filter network traffic using this list.

Commonly, they are used to connect to the Internet (via ADSL, Wireless, Cable, etc). By using a process called Network Address Translation (NAT), they can allow all connected nodes access to the Internet using only one connection. Many new ADSL Routers incorporate the functionality of an AccessPoint, allowing both wired and wireless nodes access to the Internet.

About AccessPoints

An AccessPoint (AP) acts as a central transmitter and receiver of wireless LAN (WLAN) radio signals. An AccessPoint can be thought of as a wireless-Switch in that they connect wireless nodes to a wired (usually Ethernet) network.

XH1151
(10/100Mbps 4-port Router)

XH8287
(802.11b/g AccessPoint)

DSE Provides both Bluetooth and Wi-Fi (802.11b/g) AccessPoints. DSE also provides a wide range of the hardware that is required to setup and maintain secure, wireless networks.

About Print Servers

A Print Server is a device that enables a normal printer (parallel/USB) to connect to a computer network without the need for a dedicated computer. Both wired and wireless (Bluetooth and 802.11b/g) Print Servers are available. Some printers have expansion slots inside the printer that accept a dedicated Print Server supplied by the printer manufacturer (e.g. Cannon Bluetooth Adaptor)

Connecting to the Internet

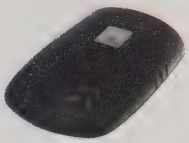
There are a number of technologies available in New Zealand which allow you to connect a computer network, or single computer, to the Internet - including ADSL, Cable Internet and Wireless broadband.

ADSL (Asymmetric Digital Subscriber Line) uses regular telephone lines to deliver high-speed Internet access to your home. It combines both digital and voice information at the phone exchange and then sends these signals to your premises via the normal phone lines. These signals need to be separated at your premises by installing a Filter on each phone device OR by installing a permanently wired splitter.

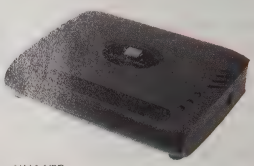
ADSL is widely available throughout New Zealand and is rapidly becoming the most common way of connecting to the Internet.

MAIN BENEFITS OF ADSL

- **Fast** - it has the ability to transfer data at speeds up to 8Mbps, or more than 100 times quicker than traditional, analog modems (e.g. 56K Modem)
- **Always on** - that means no more logging on and off, no more busy signals and no more waiting for it to connect as you are already connected!
- **Talk and surf on the same line**, at the same time - use the telephone at the same time you're accessing the internet - no more missed calls - no need for a second phone line.



XH1172
(USB ADSL Modem)



XH1175
(UTP ADSL Router)

To connect a single PC to the Internet using ADSL, the **XH1172 (USB)** is the most cost effective solution. XH1173 (1xLAN) also connects a single PC, but allows you to connect a network simply by attaching it to a HUB or SWITCH as your network grows.

To connect a network of PCs to the Internet using ADSL, one of the DSE Routers is the ideal solution. The XH1175 (4xLAN) allows you to both create a network and connect it to the Internet. The DSE ADSL Router family also include an advanced, Stateful-Packet-Inspection (SPI) Firewall.

XH8153
(Woosh Modem)

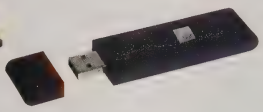
XH8244
(Woosh Signal Booster)

"**Woosh Wireless**" is a high-speed, wireless, Broadband Service Provider (BSP). It provides a high-speed Internet service without the expense of ADSL or Cable as no phone line is required. DSE also provides a range of "Woosh Wireless" modems and service plans.

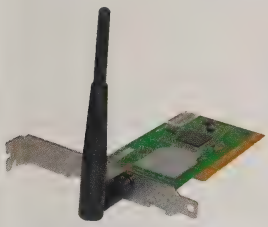
Wireless Networks

Using radio frequency (RF) technology, WLANs (Wireless Local Area Networks) transmit and receive data over the air, minimizing the need for wired connections. Thus, WLANs combine data connectivity with user mobility and though simplified configuration, enable movable LANs.

XH8225
(CardBus 802.11g Adaptor)



XH6859
(USB 802.11b Adaptor)



XH8196
(PCI 802.11g Adaptor)

There are two possible types of wireless infrastructure: Ad-hoc (peer-to-peer) and Infrastructure mode.

Wireless Operating Modes

- **Ad-hoc**: Operating in ad-hoc mode allows wireless devices within range of each other to discover and communicate in a peer-to-peer fashion without involving central access points. Typically used by two PCs to connect to one another, so, for example, the one can share the other's Internet connection.
- **Infrastructure mode**: This mode of wireless networking bridges a wireless network to a wired Ethernet network. Infrastructure mode wireless also supports central connection points for WLAN clients. A wireless AccessPoint is required for infrastructure mode wireless networking, which serves as the central WLAN communication station. Typically AccessPoints are built into Routers and ADSL Modems.

Wireless Security

- **MAC Based**: Each node on the network is manufactured with a unique address (MAC) assigned to it. The AccessPoint /Router uses a list of these addresses to control access.
- **WEP**: Wired-Equivalent-Privacy - the most widely used method of securing wireless networks. It uses a series of hexadecimal characters to form a secret "key". Although WEP is available in a variety of strengths (64/128/256-bit), it is generally regarded as insecure.
- **WPA**: WiFi-Protected-Access - is slowly taking over from WEP based security. It allows for a much stronger key, and thus better protection from eavesdroppers - a short, poorly chosen key however can lead to insecure networks.

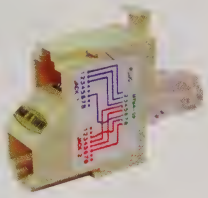
DSE & Networking

DSE has everything you need!

With DSE wide selection of networking products you will find everything you need to begin sharing printers, files, information, an Internet connection, games and much,
much more.

Our extensive range includes both wired (LAN) and the latest wireless (WLAN) solutions. DSE is also a great source for all the cables, sockets, NIC adaptors, switches, routers and even computers that you may require.

(CAT6 UTP Cable)



XH4248
(RJ-45 Data/Voice Splitter)

DSE Products comply!

All DSE products comply with the appropriate IEEE network standards. Additionally, DSE WLAN products comply with 802.11b and 802.11g Wi-Fi standards. Most DSE network devices have also been designed with Linux compatibility in mind.

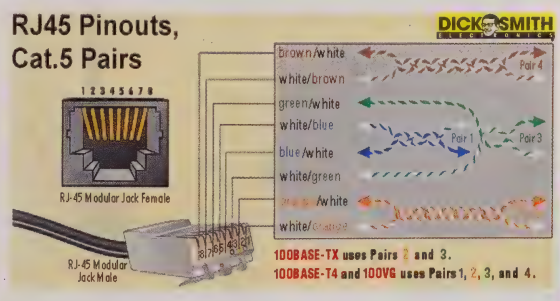
This means that DSE branded network products can be used in conjunction with LAN and WLAN products from other suppliers in a multitude of operating environments.

About Cabling & (RJ-45) Sockets

UTP (Cat5 / Cat6) cable has four twisted pairs for a total of eight individually insulated wires. Each pair is colour coded with one wire having a solid colour (blue, orange, green, brown) twisted around a second wire with a white background and a stripe of the same colour (the solid colours may have white stripes in other cables.)

UTP is the cabling used when wiring Ethernet networks and is also commonly used to carry power (power-over-Ethernet) and telephone (VoIP) signals.

RJ-45 plugs are the preferred connector for UTP cabling and are similar to those you'll see on the end of your telephone cable - except they have eight versus four/six contacts on the end of the plug and they are about twice as large. When purchasing RJ-45 plugs, ensure they are rated for Cat5 or Cat6 wiring.



Installing a Network

Preparation

Gather information and decide on what type of network you need - one that best suits your situation and budget. Make a checklist, including which products you require (Network Cards, Wireless Adaptors, Switch/Router, Cables, RJ-45 Sockets, etc.)

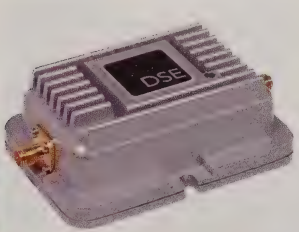
- **Prepare a floor plan**
  Indicate the location of each computer, printer or network device. Remember to take into consideration things like power and phone points or switch locations. If you are using UTP, indicate wall or surface sockets as required.
- **Prepare a materials list**
  Work though your plan, room by room, and tally up what you will need. Use our included checklists here as a guide. Other materials you may need include conduit or garden hose for burying cables, hooks and clips for suspended cables, shelving for mounting switches, routers, printers and computers.
- **Roundup the tools you may need**
  Consider the following: pliers, cutters, cordless drill, drill bits, saw, sharp knife, screwdriver, tape measure, stud finder, hammer, spade, chisels, fish-tape (for guiding cable though walls), scissors, etc.

Wired Networks - Installing cables

- For Coax networks (10Base2), the maximum length is 185m. A 10Base2 Repeater
  can expand this.
- For UTP networks (10/100/1000BaseT), the maximum segment length is 100m.
  Again, you can expand this by inserting a HUB or Switch.
- Always use more cable than you need. Leave plenty of slack.
- Never squash, or have sharp bends in Coax or UTP cables.
- Always label BOTH ENDS of each cable.
- Always protect buried cables - a garden hose or other water-proof conduit is suitable.
- Prevent fixed cables from exposure to direct sunlight. As time passes, the UV rays can damage the cable.

Wireless Networks

When installing 802.11b/g wireless networks, an AccessPoint usually provides a range of about 300m (outdoor) and 60m (indoor). This range, however, is not exact and will very, sometimes significantly, with every installation.



XH6825
(2.4GHz Signal Booster)

XH8136
(7dBi Dipole Antenna)

Using an external signal booster or antenna will help extend this range. Most DSE Wi-Fi products have been designed to use industry standard RP-SMA connectors and are able to take advantage of external antennas and signal boosters, which are also available at DSE. Adding and configuring a WDS capable AccessPoints (XH8287) will also allow you to increase the range of your wireless network.

Test each Node

As you complete the installation for each computer (or other network device), it pays to test it. Even if it is brand new, it may have problems that will be difficult to isolate later.

For coax cabling, a simple multimeter continuity check between the centre pin of the BNC-plug to the metal should indicate an open circuit - make sure the cable is not connected to a hub, PC or terminator or the test will fail.

For UTP Cat5/Cat6 cabling, a UTP cable tester should be used. This will indicate any short circuits or crossed pairs.

Q1503
(DSE LAN Cable Tester)

Q1467
(DSE Digital Multimeter)

Wireless networks and their signal strengths can be tested in many ways. A good rule-of-thumb is to setup the AccessPoint without any security - this will allow all nodes to contact and connect to the AccessPoint without having to worry about complex security keys. Then as you add nodes, verify that you can successfully connect to the AccessPoint. Once installation is complete, remember to go back and add a form of wireless security (i.e. WEP / WPA).

Components

Correctly identifying electronic parts can be one of the most difficult tasks facing someone building or repairing electronic equipment. As components become even smaller to allow higher density circuit boards, it is increasingly difficult to distinguish the different types such as resistors, capacitors, inductors and subminiature fuses. Knowing what markings to expect can be a big help when faced with a circuit board full of unfamiliar components. The information presented here, combined with a basic understanding of components should enable you to correctly identify those most commonly used.

Preferred Values

The system of preferred values, which is used for resistors, capacitors and inductors, was developed to provide a logical progression from one value to the next, where each value represents an increase by an approximately constant percentage. Depending on the tolerance of the particular components, there can be between 3 and 192 preferred values in each decade.

The more common series are shown in the tables below. Values given for each series are repeated in every decade.

3 Per Decade (50% tolerance)

10 22 47

12 Per Decade (10% tolerance)

10 12 15 18 22 27 33 39
47 56 68 82

24 Per Decade (5% tolerance)

10 11 12 13 15 16 18 20
22 24 27 30 33 36 39 43
47 51 56 62 68 75 82 91

Decimal Multipliers

Decimal multiplier prefixes are in common use to simplify and shorten the notations of quantities such as component values.

Capacitance, for example, is measured in Farads. But the Farad is far too large a unit to be of practical use in most cases. For convenience, we use sub-multiples to save a lotof figures. For example, instead of writing 0.000000000001 Farads, we write 1pF (1 picofarad).

The more common prefixes and the relationships to one another are as follows.

Abbrev. or	Prefix	Multiply by	
p	pico	0.000000000001	10^{-12}
n	nano	0.000000001	10^{-9}
u	micro	0.000001	10^{-6}
m	milli	0.001	10^{-3}
–	UNIT	1	10
k	kilo	1000	10^{3}
M	mega	1000000	10^{6}

Units

1000 pico units	=	1 nano unit
1000 nano units	=	1 micro unit
1000 micro units	=	1 milli unit
1000 milli units	=	1 unit
1000 units	=	1 kilo unit
1000 kilo units	=	1 mega unit

Circuit Notation

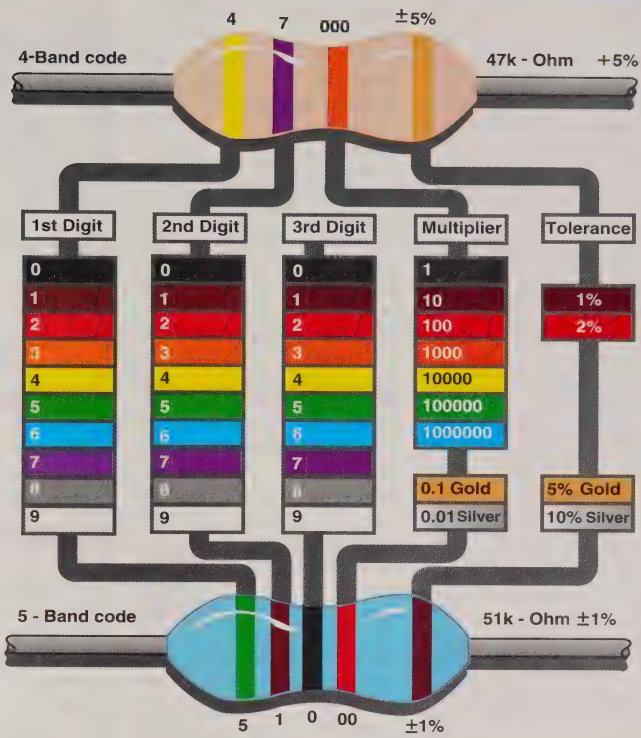
Some circuits give component values as they are normally spoken – e.g. 4.7pF for 4.7 picofarads, 5.6nH for 5.6 nanohenries. Others replace the decimal point with the first letter of the sub-multiple e.g. 5n6 for a 5.6nF capacitor or a 5.6nH inductor. Similarly for resistors, 6k8 is the same as 6.8k Ohms while 1R5 would mean 1.5 Ohms.

Tolerance

Components differ from their marked value by some amount. Tolerance specifies the maximum allowed deviation from the specified value. Tolerances are normally expressed as a percentage of the nominal value.

Example, a component with a marked value of 100 and a tolerance of 5%, could be any value between 5% below the marked value (95), and 5% above the marked value (105).

Resistor Colour Code



Resistors

Most resistors are so small that it is impractical to print their values on them using normal numeric characters. Instead, they are marked using a code of coloured bands.

Resistors made to tolerance of 5% and 10% are marked with 4 bands while higher precision types, such as 2%, 1% or better, may be marked with 5 bands to allow for an extra digit of precision.

How to read 4-band codes:
At one end of the resistor there will be a gold, silver or brown tolerance band. This band is usually spaced apart from the other three bands. Start with the band nearest to the other end. Its colour represents the first digit of the resistor's value, as shown in the colour code chart. The next band represents the second digit of the resistor's value.

The third band represents the decimal multiplier, that is,
the number of zeros that we have to put after the first two digits to arrive at the resistor's value. The final band gives us the tolerance of the resistor, silver for 10% types, gold for 5% types, brown for 1% types.

Let's take the resistor shown at the top of the colour chart as an example. It's first band is yellow, representing "4" and the second band is violet, representing "7". The third band, the multiplier, is orange which tells us to add 3 zeros to the number we already have. This is the same as multiplying it by 1,000. Thus the value of the resistor is 47,000 – forty-seven thousand ohms or 47k-ohms. Finally, the fourth band, being gold, indicates that the resistor has a 5% tolerance, that is, its actual value will be somewhere between 44,650 Ohms and 49,350 Ohms.

Some special high-voltage resistors use a yellow tolerance band in lieu of gold. This is simply because the metal particles in the gold paint might compromise the resistor's voltage rating.

What they mean:
Band one first figure of value
Band two second figure of value
Band three number of zeros/multiplier
Band four tolerance

Tolerance band colours: brown 1%, red 2%, gold 5%, silver 10%, none 20%.

Reading 5-band resistors:
Because the final band on these resistors is usually brown or red, it can be a bit more difficult to know which end to start from. In most cases the first four bands are grouped a bit closer together than the fourth and fifth bands. The first two bands are read the same as they are on the 4- band types. The third band supplies the third digit of the value. The fourth band now becomes the multiplier and the fifth represents the tolerance.

For example, if the 5 bands are, from first to fifth, yellow/orange/black/red/brown, then the three significant digits of the value would be "430", the multiplier would
be 2, and the tolerance 1%. Hence, this is the code for a 43000 Ohm, 1% resistor.

What they mean:
Band one first figure of value
Band two second figure of value
Band three third figure of value
Band four number of zeros/multiplier
Band five tolerance

A

24 hr timers	81
AC power supplies	75
AC/DC Transformers	82
Access points	20
ADSL line filter	22
ADSL modems	22
ADSL routers	22
Aerosols	110,111
Alarms car	59
Alarms home	62
Allen keys	89
Aluminium boxes	114
Amalgamating tape	109
Amplifiers TV	55
Ant TV accessories	55
Antenna bases	47
Antenna brackets	47
Antenna mounts	47
Antennas TV	54
Antistatic wet wipes	107
Audio cable	146
Audio head cleaner	107
Audio kits	159,160
Audio transformers	82
Audio/Video Cables	125
AV senders	57
AV switch boxes	57

B

Baluns TV	56
Batteries	66,67,68
Battery chargers	69
Battery clips	103
Battery holders	126
Battery packs	66,67,68
Bezels	127
Binders	7
Binoculars	59
Bipolar resistors	141
Bit sets	87
Blade fuses	128
Blow torches	94
Bluetooth	36
Boxes	114
Breadboards	112
Bridge rectifiers	142
Brother cartridges	31
Bulbs	70
Bulbs - bi pin	127
Bulbs - torch	127
Butane soldering irons	94

C

Cable - audio	146
Cable - coax	147
Cable communications	147
Cable - data	148
Cable - mains	148
Cable - microphone	146
Cable - networking	148
Cable - phone	147
Cable - video	146
Cable clamps	150
Cable clips	150
Cable fasteners	150,151
Cables -audio	125
Cables video	125
Calculators	6
Callipers - digital	104
Camera bags	8
Canon ink cartridges	32
Capacitor packs	139
Capacitors	137 - 138
Car alarms	59
Car central locking	59
Car security	59
Cases	115
CB radio	49
CB radio accessories	49
CCTV security	60,61
CD lens cleaner	107
CD media	27
CD repair kit	107
Cellular accessories	37
Ceramic fuses	128
Charger - battery	69
Charger - battery RC	69
Charger - lead acid	75
Children's kits	158
Cleaners	107,111
Click counter	104
Cloth tape	108
CMOS -4000 series	143
CMOS -74HC/74C	143
Coax cable	147
Coaxial tools	91
Communication cable	147
CompactFlash cards	8
Component packs	139
Compound	115
Computer adaptors	11,13
Computer audio cards	24
Computer cables	11,12,13
Computer cables	12,13
Computer cards	19
Computer cooling	17
Computer displays	11
Computer media	27, 28, 29
Computer modifiers	18
Computer monitors	11
Computer power supplies	18
Computer sound cards	24
Computer storage	15,16
computer tools	90
Computer video cards	24
Connectors	124
Converters voltage	76
Coolers - travel	81
Copper wire	149
Corded phone	7
Cordless drills	97
CRC aerosols	110
Crimp connectors	126
Crimp terminals	127
Crimpers	91
Crocodile clips	103

D

Data cable	148
Dbl adaptors - mains	77
Dbl adaptors - phones	38
DC power adaptors	74
DC power supplies	75
Desktop DDR	7
Desktop scanners	42
Desoldering wick	95
Digital timer	81
Diodes	142
Diodes - signal	142
Diodes Zener	142
DPDT relay	129
DVD drives	15
DVD media	28
Dynamos	122

E

Electrolube	111
Epson ink cartridges	33
Ext leads - phone	39
Extension leads	72

F

FETs	141
Finishing sander	97
Fishfinders	48
Flash Card reader	8
Fluke multimeters	101
Fun kits	157
Funway kits	154,155,156
Fuse holders	128
Fuse wire	128
Fuses	128
Fuses - blade	128
Fuses - ceramic	128
Fuses - thermal	128B

G

Gaffer tape	108
Garden lead	72
Globes	70
Globes - MBC tubular	127
Glue gun	96
GPS accessories	52,53
GPS receivers	50,51

H

Halogen light	86
Handheld scanners	42
Header pins	124
Head cleaner	107
Headsets PC	26
Heat gun	97
Heat shrink	151
Heat transfer	
Heatsinks	115
Hex nut socket set	87
Hobby tool kit	89
Home alarms	62
Home security	62,63,64,65
HP ink cartridges	34

I

ICP Battery saver	85
Impact drill	97
In car navigation	41
Indoor TV antenna	46
Ink cartridges	30,31,32,33,34
Instrument case	115
Insulation tape	108
intercom	7
Inverters	76

J

Jigsaw	97

K

Keyboards	10
Kits - children	158
Kits - meter	161
Kits - power supply	160
Kits-audio	159
Kitsets	154 - 162
Knobs	134

L

LAB Power supply	106
Label Machines	8
Laminators	7
Lamps	70
Leads - mains	149
LED packs	140
Light bulbs	70
Light switches	79
Logic probe	102
Lug crimpers	91
Lux meter	105

M

Magnifiers	86
Mains Cable	148
Mains leads	72,149
Mains plugs	78
Marine radio	48
MBC tubular globes	127
Meccano kits	157
Media PC	27,28,29
Memory sticks	8
Meter accessories	103
Meter kits	161
Meters - specialist	104, 105
Mice	10
Microphone cable	146
Microphones PC	26
Mini screwdrivers	88
Modem 56K	23
Modem ADSL	22
Motors	122
Mounts TV	56
Multimeters	98,99,100,101

N

Navman	41
Networking cable	148
Networking cards	21
Networking switch	21
Nibbler	90

NiCad/NiMH batteries 68
Night lights 70
Notebook bags 13
Notebook DDR 7
Notebook power 77
Notebook security 59
Notebook speakers 25

O

Organisers 4
Outdoor TV antenna 46

P

Palm sander 97
Panel meters 106
Paper 35
PC headsets 26
PC microphones 26
PC speakers 25
PCBs 112
PDAs 5
Personal navigation 41
Personal security 63
Phone accessories 38,39
Phone cable 147
Phone -corded 7
Phone crimpers 91
Plastic cases 115
Pliers 89
Plug packs 75
Plugs - mains 78
Plugs/sockets 116 -121, 125
Polycarbonate box 114
Potentiometers 135
Power - notebook 77
Power adaptors 74
Power boards - surge 73
Power cable 144
Power FETs 141
Power leads 72
Power supplies - AC 75
Power supplies - DC 75
Power supply - LAB 106
Power supply kits 160
Power tools 97
Powerboards 77
Pre-amp kits 159
Printer ink 30,31
Prototype boards 113
PRS accessories 45
PRS tranceivers 44,46
P-Touch labels 7
Pumps 122

R

Radio scanners 42
RC battery charger 69
RCDs 81
Reamer 90
Rectifier Diode packs 140
Rectifiers - bridge 142
Rectifiers - standard 142
Relays 129
Remotes TV 57
Resistor packs 139
Resistors 136

S

Safety glasses 86
Sander 97
Scanner accessories 43
Scanner antenna 43
Scanners 42
Scewdrivers 88
Screen wipes 107
SD cards 8
Security bit sets 87
Security car 59
Security home 62,63,64,65
Semiconductor pack 140
Signal diodes 142
Slingshot 23
Sockets/plugs 116 - 121, 124, 125
Solar panels 85
Solar torches 71
Solder 95
Solder accessories 96
Solder iron -butane 94
Soldering irons 92
Soldering stations 93
Sonic tape measure 104
Sound cards 24,25
Sound meter 105
Spanners 89
SPDT relay 129
Speaker cable 145
Specialist batteries 67
Specialist screwdrivers 88
Splitters TV 55
Standard rectifiers 142
Strip boards 113
Strippers - wire 90
Surge boards 73
Surge protection 73
Surveillance 60,61
Switches 130 - 133
Switches - light 79

T

TAB connectors 127
TABS - male 126
Tape - amalgamating 109
Tape - cloth 108
Tape - gaffer 108
Tape - insulation 108
Telephone cable 147
Telescopes 58
Terminals 126
Test clips 103
Test equipment 102
Thermal fuses 128
Thermal grease 115
Thermometers 105
Timer pins 81
Timers 81
Tool sets 89
Tools - computer 90
Torches 71
Toroids 139
Transformers 82,83,84
Transistors 141
Travel adaptors 80
Travel coolers 81
Trigger transformers 82
Trimpots 135
TTL - 74LS series 143
TV amplifiers 55
TV ant. Accessories 55
TV antenna mounts 56
TV antennas 54
TV baluns 56
TV remotes 57
TV splitters 55
TV/audio cards 24

U

Universal probe 102
UPS 18
USB adaptors 14
USB Docks 14
USB Hubs 14

V

Velcro 108
VHF Marine radio 48
Vices 86
Video cable 146
Video cables 125
Video/TV cards 24
Vision enhancement 86
VoIP phone 23
Voltage converters 76
Voltage finder 102

W

Wall outlets 123
Wall plates 79
Wall switches 79
Water meter PH 105
Weather stations 40
Winding wire 149
Wire - copper tinned 149
Wire - winding 149
Wire and cable 144 - 148
Wire strippers 90
Wired networking 21
Wireless camera PC 24
Wireless gateway 20
Wireless networking 20
Wireless routers 20
Work light 86

X

XD Cards 8

Z

Zener diodes 142
Zip disks 29
Zippy boxes 114

DATA SECTION

555 Timer 174
723 voltage regulator 174
AccessPoints 182
ASCII 178
Battery guide 163
Broadcast standards 179
Capacitors 164
CB radio channels 179
Circuit laws 166
Computer connectors 180
Copper cable characteristics 167
Darlington Drivers 177
Discrete optoelectronics 170
Electronic formulas 166
FETs 169
Fuse types 165
Hubs and switches 182
Inductor design 166
Internet connection 182
Japanese semiconductors semis 165
Keypad - numeric 177
LCD Display modules Z4170/Z4172 170
LEDs 171
Marine frequencies 179
MOS handling 165
Multimeter safety ratings 165
Network installation 184
Networking 181
Opto couplers 176
Power MOSFETs 177
Print servers 182
Properties of copper 167
Resistor colour codes 185
RMS average and peak relationships 165
RS-232 connections 178
RS-232 interface 178
Semiconductor outlines 172
Spectrum 179
Timers/voltage regulators 173-175
Tolerance 185
Transistors 168
TV channels UHF 179
TV channels VHF 179
Winding wire data 167
Wireless networks 183
Zener Data 170

DICK SMITH ELECTRONICS That's where you go!

A
A2283 16
A2365 16
A2366 16
B
B1636 122
B2600 153
B2605 155
B7491 122
B7496 122
C
C0528 125
C1011 125
C1021 125
C1061 125
C1069 125
C1070 125
C1071 125
C1072 125
C1074 125
C1080 125
C1090 125
C1095 125
C1101 125
C1107 125
C1109 125
C1121 125
C1150 125
C1158 125
C1159 125
C1161 125
C1165 125
C1166 125
C1172 125
C1180 125
C1181 125
C1182 125
C1185 125
C1186 125
C1187 125
C1190 125
C1233 125
C1234 125
C1235 125
C1236 125
C1239 125
C1240 125
C1242 125
C1243 125
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C1247 125
C1250 125
C1252 125
C1253 125
C1255 125
C1280 125
C1285 125
C1286 125
C1288 125
C1290 125
C1400 125
C1401 125
C1405 125
C1406 125
C1420 125
C1421 125
C1422 125
C1904 125
C1924 125
C1945 125
C1947 125
C1950 125
C1965 125
C1970 125
C2545 57
C3969 29
C7098 107
C7116 107
C7128 107
C7129 107
C7142 107
C7147 107
C9307 28
D
D1436 49
D1696 48
D1697 48
D1721 44
D1763 42
D1763 46
D1764 46
D1774 45
D1776 44
D1779 44
D1787 44
D1793 44
D1804 44
D1815 45
D1825 45
D1826 45
D1827 45
D1828 45
D1832 45
D1835 46
D1836 49
D1846 44
D2017 45
D2018 45
D2036 45
D2041 45
D2042 45
D2044 45
D2046 45
D2048 45
D2049 45
D2050 45
D2051 45
D2052 45
D2250 49
D2275 49
D2764 42
D2765 42
D2766 42
D2804 42
D2805 42
D3476 50
D3477 50
D3478 50
D3479 50
D3482 50
D3483 50
D3484 51
D3484 51
D3485 53
D3486 52
D3487 52
D3488 52
D3489 52
D3521 51
D3526 48
D3527 48
D3528 48
D3529 50
D3800 106
D3854 41
D3855 41
D3879 52
D3880 52
D3881 51
D3882 52
D3883 52
D3884 52
D3885 53
D3886 53
D3887 52
D3888 52
D3889 52
D3890 53
D3891 53
D3893 53
D3895 53
D3897 53
D3898 50
D3922 53
D3946 53
D3955 53
D3971 40
D4000 46
D4005 41
D4006 46
D4007 46
D4008 46
D4011 46
D4013 46
D4014 48
D4020 46
D4022 47
D4024 41
D4028 46
D4035 47
D4050 47
D4056 47
D4060 49
D4061 49
D4063 49
D4064 49
D4068 49
D4084 48
D4106 41
D4151 49
D4313 47
D4432 43
D4433 43
D4434 43
D4437 43
D4500 47
D4509 47
D4513 47
D4514 47
D4515 47
D4518 47
D4519 47
D5152 47
D5153 47
D5155 47
D5156 47
D5160 47
D5165 47
D5170 47
D9001 47
D9002 51
D9003 51
D9007 43
D9008 43
D9009 43
D9011 48
D9018 51
D9019 51
D9024 53
D9026 42
D9027 53
D9028 53
D9034 53
D9036 43
D9037 43
D9038 53
D9039 48
D9040 51
D9041 53
D9042 53
D9043 53
D9044 53
D9046 52
D9047 52
D9053 51
D9056 42
D9057 44
D9061 46
D9062 52
D9081 52
E
E0216 37
E0218 37
E0281 37
E0283 37
E0286 37
E0287 37
E0293 37
E0294 37
E0310 37
E0311 37
E0314 37
E0406 37
E0427 37
E0431 37
E0439 37
E0458 37
E1656 37
E1657 37
E1658 37
E1660 37
E1670 37
E1675 37
E2029 37
E2108 37
E2158 37
E2164 37
E2224 37
E2418 37
E2625 37
E2628 37
E2629 37
E2634 37
E2635 37
E2642 37
E2643 37
E2681 37
E2691 37
E2692 37
E2695 37
E2696 37
E2697 37
E2698 37
E2699 37
E2703 37
E2716 37
E2742 37
E2778 37
E2779 37
E2864 36
E2878 37
E2879 37
E2880 37
E2881 37
E2882 37
E2886 37
E2887 37
E2888 37
E2889 37
E2894 37
E2896 37
E2897 37
E2902 37
E2903 37
E2919 37
E2921 5
E2947 37
E2949 37
E3013 36
E3014 36
E3015 36
E3016 36
E3017 36
E3018 36
E3026 37
E3027 37
E3052 37
E3053 37
E3146 37
E3204 37
E3273 37
E3277 37
E3721 37
E3722 37
E3879 37
E4084 37
E4085 37
E4094 37
E5313 37
E9057 37
E9058 37
E9063 37
E9067 37
E9069 37
E9074 37
E9085 37
E9455 37
F
F0530 31
F0566 31
F0568 31
F0569 7
F0570 7
F0804 31
F0818 31
F0861 31
F0930 31
F1321 8
F1323 8
F1327 7
F1328 7
F1365 8
F1370 8
F1371 8
F1372 7
F1373 7
F1374 7
F1405 7
F1501 7
F1506 7
F1601 7
F1603 7
F1604 7
F1614 7
F1631 7
F1634 7
F1635 7
F1651 7
F1652 7
F1653 7
F1654 7
F1655 7
F1656 7
F1657 7
F1658 7
F1659 7
F1669 7
F1673 7
F1674 7
F1680 7
F1681 7
F1683 7
F1685 7
F1688 7
F1689 7
F1691 7
F2146 38
F2147 38
F2148 38
F2149 38
F2152 39
F2153 39
F2155 39
F2156 39
F2157 39
F2161 39
F2162 39
F2163 39
F2164 39
F2165 39
F2166 39
F2167 39
F2185 39
F2203 38
F2204 38
F2205 38
F2206 39
F4525 7
F9001 38
F9002 38
F9006 39
F9007 39
F9008 39
F9009 39
F9010 39
F9011 38
F9015 39
F9024 91
F9025 91
F9041 39
F9062 38
F9069 8
F9075 31
F9076 8
F9078 31
F9079 31
F9080 31
F9081 31
F9099 8
F9102 39
F9103 39
F9111 31
F9113 38
F9121 38
F9150 38
F9187 31
F9188 31
F9256 39
F9257 39
F9258 38
F9276 38
F9277 38
F9278 38
F9296 31
F9297 31
F9298 31
F9299 31
F9333 31
F9334 31
F9335 31
F9336 31
F9337 31
F9413 39
F9772 38
F9777 38
F9839 68
F9844 31
F9899 31
F9921 39
F9932 31
F9933 31
F9956 31
F9957 31
F9958 31
F9959 31
F9989 31
G
G0008 57
G0144 57
G1291 57
G1301 57
G7701 57
G8073 57
G8074 57
G8675 57
H
H1716 152
H1730 152
H1731 152
H1780 151
H1861 152
H1883 152
H1892 152
H1893 152
H1904 150
H1906 150
H1914 131
H1929 150
H1930 152
H1932 152
H1946 150
H1947 150
H1949 150
H1950 150
H1951 150
H1952 150
H1953 150
H1955 150
H1956 150
H1957 150
H1958 150
H1963 150
H1964 150
H1965 150
H1966 150
H1973 150
H1974 150
H1976 150
H1977 150
H1980 150
H1982 150
H1989 150
H1991 150
H1993 150
H1996 127
H1997 150
H2010 150
H2011 150
H2012 150
H2024 150
H2233 114
H2234 114
H2236 114
H2508 115
H2512 115
H2520 115
H2840 114
H2841 114
H2842 114
H2843 114
H2851 114
H2852 114
H2853 114
H2855 114
H2860 114
H2863 114
H2864 114
H2865 114
H2867 114
H2869 114
H2870 114
H2872 114
H2878 114
H2880 114
H2882 114
H2921 114
H3182 128
H3200 126
H3201 126
H3202 126
H3203 126
H3204 126
H3205 126
H3206 126
H3207 126
H3208 126
H3210 126
H3211 126
H3212 126
H3213 126
H3214 126
H3215 126
H3216 126
H3217 126
H3218 126
H3219 126
H3220 126
H3221 126
H3222 126
H3223 126
H3224 126
H3225 126
H3226 126
H3227 126
H3228 126
H3229 126
H3230 126
H3231 126
H3232 126
H3233 126
H3234 126
H3406 115
H3408 115
H3432 115
H3436 115
H4020 112
H4035 112
H4040 112
H4044 112
H4050 154
H4587 115
H4593 115
H5006 127
H5008 127
H5009 127
H5016 127
H5022 127
H5036 127
H5038 127
H5061 91
H5070 127
H5112 113
H5540 112
H5550 112
H5601 113
H5603 113
H5604 113
H5605 113
H5607 113
H5608 113
H5609 113
H5612 113
H5613 113
H5614 113
H5616 113
H5658 151
H6015 152
H6016 152
H6018 152
K
K0018 157
K0028 158
K0029 158
K0059 157
K0061 157
K0062 157
K0064 157
K1044 161
K1115 158
K1116 158
K1117 158
K1118 158
K1119 158
K1254 157
K1260 157
K1262 157
K1263 157
K1488 157
K2600 153
K2602 154
K2610 154
K2621 155
K2622 155
K2623 155
K2624 155
K2625 155
K2626 155
K2627 155
K2628 155
K2629 155
K2630 155
K2631 154
K2632 156
K2633 156
K2634 156
K2635 156
K2636 156
K2637 156
K2638 156
K2639 156
K2640 156
K2805 161
K2806 159
K2807 161
K2808 160
K2811 159
K2813 161
K3018 162
K3070 162
K3072 162
K3124 162
K3132 162
K3168 161
K3431 160
K3435 160
K3592 160
K3594 160
K3603 161
K3610 161
K4611 162
K5006 159
K5008 160
K5018 159
K5401 160
K5402 159
K5604 160
K5608 159
K5624 160
K7001 161
K7214 161
K7215 162
K7217 162
K9300 159
K9301 159
K9305 158
K9306 158
K9307 158
K9320 158
K9321 158
K9322 158
K9323 158
L
L0020 54
L0040 55
L0171 54
L2105 47
L2106 55
L2252 56
L2259 56
L4011 54
L4015 54
L4016 54
L4017 54
L4060 56
L4078 54
L4085 54
L4166 56
L4207 55
L4219 55
L4221 55
L4222 55
L4223 56
L4270 55
L4272 55
L4454 56
L4456 56
L4465 56
L4469 56
L4472 55
L4474 55
L4478 56
L4603 54
L4607 54
L4609 54
L4626 56
L4628 56
L4629 56
L4631 56
L4641 56
L4642 56
L4655 54
L4663 56
L4664 55
L4671 55
L4679 56
L4680 57
L4688 54
L4710 54
L4711 55
L4712 55
L4713 55
L4714 55
L4715 54
L4716 54
L5018 65
L5051 63
L5061 63
L5211 65
L5214 65
L5240 65
L5288 65
L5302 64
L5305 64
L5314 65
L5322 65
L5366 59
L5367 59
L5451 59
L5746 62
L5747 62
L5748 62
L5749 62
L5760P 63
L5765 62
L5809 65
L5849 61
L5852 61
L5856 61
L5859 61
L5863 60
L5864 60
L5866 57
L5867 57
L5868 61
L5869 61
L5878 60
L5892 60
L5893 61
L5903 61
L5906 60
L5907 60
L5909 60
L5910 60
L5911 60
L5912 60
L5913 61
L5915 60
L5916 60
L5921 60
L5923 60
L5925 60
L5927 60
L5960 57
L6002 64
L6003 64
L7009 64
L7022 64
L7024 64
L7025 64
L7027 64
L7029 64
L7034 64
L7201 63
L7220 63
L7228 63
L7232 65
L7233 65
L7510 63
L8042 63
L8139 63
L8140 63
L8202 59
L8206 59
L8207 59
L8219 59
L8250 58
L8251 58
L8252 58
L8258 58
L8600 63
L8603 13
L8603 59
L8604 63
L9500 13
L9500 59
L9501 59
L9502 61
L9503 63
L9503 65
L9504 61
L9505 61
L9509 59
L9914 62
L9915 62
L9916 62
L9917 62
L9918 62
L9923 59
M
M0104 82
M0144 82
M0216 82
M0222 82
M1149 83
M1154 84
M1155 83
M1159 83
M1160 84
M1161 84
M1181 84
M1182 84
M1991 82
M2000 82
M2155 82
M2156 82
M2158 82
M2840 82
M2851 82
M2853 82
M2856 82
M2860 82
M4500 81
M4502 81
M5102 76
M5110 76
M5111 76
M5113 76
M5213 76
M6201 81
M6672 82
M7000 78
M7002 78
M7006 78
M7007 78
M7013 78
M7018 78
M7022 78
M7026 79
M7027 79
M7029 79
M7036 79
M7037 79
M7040 79
M7042 79
M7045 79
M7046 79
M7056 79
M7060 78
M7066 78
M7068 78
M7080 72
M7081 72
M7082 72
M7083 72
M7084 72
M7098 78
M7106 77
M7107 77
M7118 77
M7128 77
M7133 77
M7148 73
M7148 77
M7153 77
M7165 73
M7165 77
M7227 81
M7237 77
M7240 70
M7263 77
M7266 81
M7294 81
M7310 80
M7312 80
M7314 80
M7315 80
M7316 80
M7317 80
M7336 72
M7336 77
M7351 72
M7352 72
M7353 72
M7354 72

M7355 72
M7362 72
M7363 72
M7364 72
M7365 72
M7366 72
M7372 81
M7386 73
M7387 73
M7388 73
M7389 73
M7390 73
M7391 73
M7392 73
M7393 73
M7394 73
M7395 73
M7396 73
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Karangahape Rd 442 Karangahape Rd, 0-9-309 4402
Newmarket 50 Remuera Road, 0-9-524 7033
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St Lukes Cnr Wagener Place and St Lukes Road, Mt Albert 0-9-845 0102
New Lynn 3045 Great North Rd, 0-9-827 0433
Onehunga 252-258 Onehunga Mall, 0-9-634 6767
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HAMILTON 299 Barton St, 0-7-839 4491
THAMES 509 Pollen St, 0-7-867-9215
TAURANGA Cnr Willow & Spring Sts, 0-7-578 7071
MT MAUNGANUI Shop 6, Bayfair, 2 Owens Place, 0-7-574 3942
ROTORUA 1175 Pukuatua St, 0-7-349 0270
NAPIER 20 – 60 Wellesley Rd, 0-6-835 5137
NEW PLYMOUTH 70 – 72 Devon St East, 0-6-758 3309
WANGANUI 122B Victoria St, 0-6-348 7270
PALMERSTON NORTH Cnr Fitzherbert Ave & Ferguson St, 0-6-359 4447
MASTERTON 235 Queen Street, 0-6-370 2025 - Open 26 Sept 2005
WELLINGTON Cnr Featherston & Panama Sts (under the Inter Continental Hotel), 0-4-473 9858 & 57 Vivian Street, 0-4-384 8198
Manners Mall 4 Manners Mall, 0-4-385 6788
Upper Hutt 133 Main St, 0-4-528-0505
Lower Hutt 90 Queens Dr, 0-4-566 2022
Porirua City 36 Parumoana St, Porirua Mega Centre, Stage 3, 0-4-237 6654
Johnsonville Shop 1, 120 Johnsonville Rd, 0-4-461 7590
NELSON 150 Hardy St, 0-3-548 9161
BLENHEIM 15 Maxwell Rd, 0-3-578-1132
CHRISTCHURCH 130 Manchester St, 0-3-365 5560
Cnr Colombo & St Asaph Sts, 0-3-366 2703
Papanui Cnr Main North Rd & Langdon's Rd,, 0-3-352 8770
Riccarton Shop 140, Westfield Shopping Town, Rotherham St, 0-3-343 0812
The Palms Shop 95 The Palms Shopping Centre, Cnr Marshlands & New Brighton Rds, Shirley, 0-3-386 2670
TIMARU 295 Stafford St, 0-3-684 6876
DUNEDIN 342 Moray Place, 0-3-474 1096 & 59 Cumberland St, 0-3-470 1680
INVERCARGILL 63 Leven St, 0-3-214 4363

Dick Smith Electronics Powerhouse
4 Thackeray St, Hamilton 0-7-834 4099

AUTHORISED STOCKISTS

Alexandra
Central Betta Electrical, 15 Tarbert St, 0-3-448 7317
Feilding
David Brice Electronics Ltd, 47 Kimbolton Rd, (Opposite Clock Tower), 0-6-323 7141
Gisborne
AMPS Electronics, 131 Gladstone Rd, 0-6-868 1366
Hastings
BayTech Services, 114 North King St, 0-6-878-8962
Keri Keri
Keri Keri Electronics, 63 Main St, 0-9-407 5589
Matamata
Electronics Plus, 43 – 45 Waharoa Rd East, 0-7-888 5955
Orewa
Tronix, Westpac Plaza, Bakehouse Lane 0-9-426 2007
Paraparaumu
Kapiti Electronics Ltd, Shop 7, Kapiti Lights Shopping Centre Amotia St, Paraparaumu, 0-4-904 4100
Rangiora
R.R.T Ltd, The Gables, 96-98 High St 0-3-310-7383
Taupo
Talk Time 2000 Ltd, Cnr Gascoigne & Tamamutu Sts, 0-7-377 0668
Te Puke
Electronics Plus, 63 Jellicoe St, 0-7-573 7544

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The Dick Smith Electronics Terms of Trade exclude the provisions of the Consumer Guarantees Act 1993, where you acquire goods or services, or hold yourself out as acquiring them, for the purposes of business. However, Dick Smith Electronics gives a standard minimum warranty of 90 days from the date of purchase on all goods in this catalogue. Many items now carry manufacturers' warranties from 12 months to two years, with some up to five years. Please ask our store staff for details.

All New Zealand manufacturers' warranties are fully valid on products we sell.

Warranty Service If you are not supplied with a warranty card, keep your cash register receipt in a safe place, as this receipt will become your warranty card. Faulty goods returned for repair must be accompanied by the receipt or proof of purchase.

Repairs under warranty are carried out free of charge. You must return goods to us for warranty service. If they are faulty, we will return them freight FREE within New Zealand. If they are not faulty, or you are a business customer, you will be required to pay the freight both ways. Therefore, to save yourself money, make absolutely certain that the goods are faulty before returning them for repair.

Stock & Prices

This catalogue was published in September 2005. Prices include GST and are valid until 31 October, 2005.

After that time, whilst every effort will be made to maintain these prices, you will appreciate that factors outside our control may result in price increases. At the date of printing, we believe the displayed products will be available, however in some instances product may be in limited quantities or unavailable due to circumstances over which we have no control. In the event of these circumstances arising, we apologise for any inconvenience. If you would like to check with us as to current pricing or stock availability, please do not hesitate to call, or visit www.dse.co.nz

Back orders

All goods in stock are despatched promptly. Out-of-stock lines are automatically placed on back order for later delivery. Or, if you prefer, we'll refund pre-paid orders. Back Ordered stock will be sent later at our expense unless we advise otherwise. Back order prices are firm for 60 days from date of order. All back orders are despatched immediately we receive the goods from our suppliers. When we send a copy of your order back to you, the delay times will be estimated, but because this information is given to us by our suppliers we cannot guarantee their accuracy. Stock availability and due dates are displayed and updated regularly on the product information page at www.dse.co.nz

Damaged Goods

If goods are incomplete, please notify Dick Smith Electronics immediately. If goods are received damaged, the carrier must be notified immediately, and a claim lodged with Dick Smith Electronics.

Satisfaction Guaranteed

Shop with confidence with our 'Change of Mind' Policy 14 day money back guarantee. Where you change your mind, goods can only be accepted for refund or exchange in unmarked original condition and packaging, complete with all instruction books, accessories, etc, plus sales docket or proof of purchase. If a mail order item, we will refund your money – less transportation costs except where goods are faulty.

Please note Refunds on Change of Mind purchases do not apply to static sensitive components and cut cable.

Incorrect or faulty goods returned for repair or exchange must be accompanied by a sales docket or proof of purchase.

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We do give written quotations if required. We must emphasise however, that all prices are subject to confirmation at time of order. This is because there are many factors in our prices that are beyond our control and therefore beyond our responsibility. Quotation requests can be made via our Wholesale Division at Head Office (see address and phone numbers at bottom of this page).

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You are welcome to enquire about your order by phoning our enquiry line **(09) 414 2800** or **0800 373 347**. Because our system is computerised, we can normally give you the information you want very quickly – at most within a couple of minutes.

Before phoning, please have available your customer number (from your last invoice or from any correspondence), name and address on order, and the information required.

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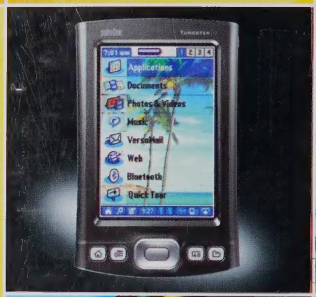
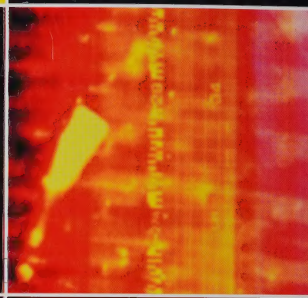
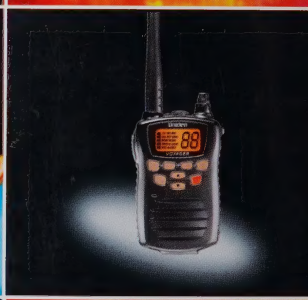
- Exclusive products backed by Dick Smith Electronics
- The pricing advantages made possible only by a national retail group.

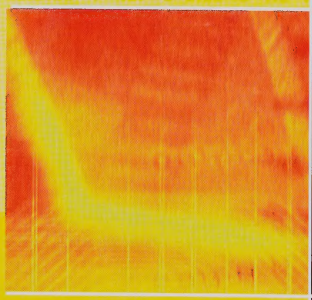
For further information please call

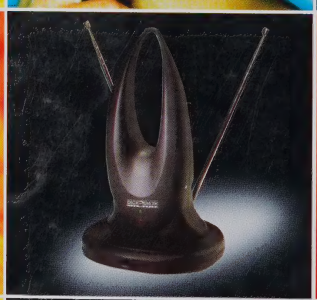
Head Office: **Phone Auckland 09 414 2800; Freefax 0800 800 290**
or write to: **Dick Smith Electronics Wholesale, Private Bag 102 903, North Shore Mail Centre, Auckland, New Zealand**

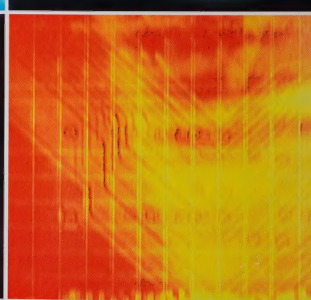


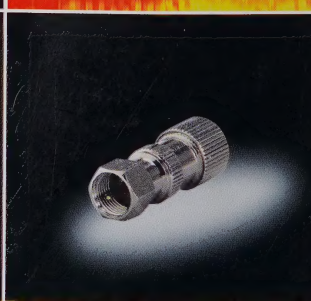












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